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IN THE

Supreme Court of the United States

OCTOBER TERM, 1936

No. 36

SAMUEL B. SMITH,

Petitioner,

v.

JAMES MANUFACTURING COMPANY and ELMIRA HATCHERIES, INC.,

Respondents.

BRIEF ON BEHALF OF RESPONDENTS

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Statement of the Case

The Smith patent in suit covers both a method of hatching eggs and an apparatus for that purpose. Claims 1, 2, 3 and 5 are in issue. Claims 2, 3 and 5 are before this Court for the first time; Claim 5 deals with the apparatus, and the remaining claims with the method.

The Invention of Patent in Suit as Defined by This Court.

It is upon this Court's definition of the Smith patent that the respondents rest their case of anticipation of the patent by the Hastings' publications and prior uses; and their case of non-infringement, in the event this Court takes up the latter question.

This Smith patent, as so defined, covers a method of hatching and an apparatus for that purpose characterized by a forced draft of air moving in a continuous path

or circuit over eggs of different ages so that the heat of the older and hotter eggs, which grow hotter as they approach hatching time on the 21st day, will be conveyed to the cooler and younger eggs. This Court has found that the exact order of arrangement of these eggs at different ages is immaterial.

The Smith patent[1] employs a cabinet large enough for a man to walk into having a corridor 5 which the man occupies during loading and unloading of the egg trays 13-14 on either side of the corridor. These egg trays are arranged in stacks of trays in separate compartments. Partitions or curtains 3 and 4 serve to separate the corridor 5 from the stacks of egg trays when the machine is in operation so that the room fans 18 with tilted blades can blow the air current downwardly through the corridor 5 between the curtains or partitions 3 and 4. The descending air current mushrooms on the floor, divides in defined paths, rises through the stacks of egg trays and thence returns from the top of the compartments to the fan for another circuit. A part of the air may leak out of the exit openings 28 and its place is taken by a small amount of incoming fresh air. The major portion of the air returns to the fans over the heating pipes 23 and is circulated over and over again. This air travels as a current in well defined paths from one point to another through the eggs set in staged incubation in a continuous circuit. These eggs remain in the cabinet until they hatch on the twenty-first day. The blades of the fans 18 are tilted to drive the air in one direction only so as to bring about a circuit or current of air moving as a body in order to effect the heat transfer.

The essential features of the patent, as defined by this

[1] Vol. I, p. 671.

Court and as urged upon this Court by petitioner in the *Snow* and *Waxham* cases, are the combination of the features of staged incubation, that is, eggs of different ages, and of a forced draft of air moved by a mechanical means, such as a fan, in a circuit over and over these eggs.

> "* * * It was possible to carry on the process of incubation continuously by placing fresh eggs in the incubator at intervals, as those of the most advanced stage hatched and the new born chicks were removed. * * *
>
> "The specifications and claim both contemplate a continuous circulation of the current of heated air through the chamber, which, regardless of its direction, would continuously operate, by repeated contacts with the eggs in all stages, to equalize the temperature throughout the chamber by carrying heat units from the warmer to the cooler eggs." *Smith v. Snow*, 294 U. S. 1, 6, 12.

The Issues.

The issues for this Court's determination are the following:

I. The validity of the Smith patent in view of the new defenses of the Hastings' prior publications and prior uses for the first time in this Court.

II. Whether respondents' new method of "separate hatching," for the first time before this Court, is an infringement of the Smith patent, particularly in view of the position of the petitioner on the scope of its patent with reference to the Hastings prior uses and publications and the definition heretofore accorded to this patent by this Court.

The Opinions Below.

The Second Circuit Court of Appeals concluded, upon a careful examination of the record, that the Hastings

publications and prior uses showed lack of inventorship in Smith and were an anticipation of the Smith patent. Its findings are all supported by the credible testimony of reputable witnesses. There is no contention by petitioner that these findings of fact are unsupported by competent evidence, but it rather contends that they are contrary to the weight of evidence. The Second Circuit Court of Appeals has made its findings upon the record, which is the record now before this Court, and the question is whether upon such findings of fact, as a matter of law, there is shown lack of inventorship in Smith and anticipation of the Smith patent. Petitioner is urging that this Court review the record and arrive at different findings of fact because it contends that these findings are contrary to the weight of the evidence.

We submit that this is a case that falls within that class of cases which involve no serious questions of law, but rest wholly on the facts established by the proof.

We understand the law to be, as stated by Mr. Justice Brewer in *Lawson v. United States,* 207 U. S. 1, 12:

> "* * * It is our duty to accept a finding of fact, unless clearly and manifestly wrong."

Again, in *Butte & Superior v. Clark-Montana,* 249 U. S. 12, 30, Mr. Justice McKenna said, in quoting *Lawson v. United States Mining,* supra:

> "* * * And we said in *Lawson v. United States Mining,* supra, of the conclusion of the Circuit Court of Appeals in such case—and the concession is as great as appellant is entitled to—'That if the testimony does not show that it [the conclusion of the Court] is correct, it fails to show that it is wrong, and under those circumstances we are not justified in disturbing that conclusion. It is our duty to accept a finding of fact, unless clearly and manifestly wrong.' The findings accepted, the conclu-

sions of law must be pronounced to be of necessary sequence."

Also *U. S. v. United Shoe Machinery*, 247 U. S. 32, 41.

Respondents now submit to this Court for the FIRST TIME the prior publications and prior uses of Milo M. Hastings.

Partial records considered by the Sixth and Third Circuit Courts of Appeal are summed up by the opinion of the Second Circuit Court of Appeals in this case thus:

> "Although the patent has been held valid in a number of cases, only two Circuit Courts have considered Hastings. In a prior litigation (*Buckeye Incubator Co. v. Wolf*, 291 Fed. 253, [D. C. N. D. Ohio,] affirmed 296 Fed. 680 [C.C.A.6]) there was introduced the publication in the Dollar Hen and other publications as well as the Hastings' application and there it was found that these did not describe an anticipation of Smith's method. While the patent application is referred to, no mention is made of the brief of Hastings' patent attorneys. *Hastings was not a witness nor was any witness called to testify to what his prior use had been.* In *Buckeye Incubator Co. v. Cooley* (C. C. A.) 17 F. (2) 453, the same evidence was in the record, and Hastings was a witness, but the Third Circuit found his testimony unconvincing and that alleged prior uses were not of Smith's method because they did not provide for a regular current of air. *This is the first time the prior uses at the Davis place and at Muskogee have been so fully presented and substantiated.*
>
> *"On the record now before the court, it is impossible to agree that Smith's discovery was not 'known or used by others in this country* before his invention or discovery thereof.' 35 U. S. C. A. 31. *Decree reversed."* (83 F. (2d) 217, 220.)

In the Sixth Circuit Court of Appeals, Judge Westenhaver was affirmed without comment on the Hastings

matter. At that time, the construcion sought by the petitioner for his patent was a much narrower one than he seeks today. Later, these publications and the partial testimony of Hastings were introduced before Judge Bodine in the United States District Court for New Jersey in *Smith v. Cooley,* unreported,[1] who concluded that: "a complete anticipation is indicated" but found insufficient evidence to support a finding of commercial success and insufficient evidence as to the details of construction. The present record remedies those defects.

The Third Circuit Court of Appeals[2] limited the Smith patent to "a central corridor and placed partitions or curtains from the top to a short distance from the bottom of the tiers and directed the air current downwardly not through the eggs but through the corridor where it mushroomed on the floor, spread beneath the tiers, ascended through the egg trays and escaped through definitely arranged air outlets." As so limited in detail, it found that the Hastings prior uses did not anticipate the Smith patent because not having the same detailed arrangement and apparently not commercially successful—an error of law in evaluating a prior use. *Corona v. Dovan,* 276 U. S. 358, 384. The findings of that Court on the Hastings prior uses would have been sufficient to anticipate the Smith patent if the patent had then received the same interpretation and scope by that Court as later accorded to it by this Court upon petitioner's insistence. Other lower Courts have considered the matter on partial records.[3]

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[1] Printed with Petitioner's Certiorari Petition.

[2] Buckeye v. Cooley, 17 F. (2d) 453, 455.

[3] We deem it unnecessary to repeat the differences at length between the several records as they are fully set forth in the briefs on petition for certiorari. It is now immaterial what other Courts had before them as the material issue here is whether the proof in this record now before this Court shows the anticipation of the Smith patent that we think it does.

New Evidence on Hastings Prior Use.

For the first time in any case, this record contains proof of the Hastings prior use at Muskogee, Oklahoma, based upon contemporary record evidence comprising original photographs, printed dated publications in the national and local press, the original blower in the Muskogee incubator, and the testimony of a number of new witnesses. This proof disclosed a complete anticipation of the Smith patent.

In addition to the more complete testimony of Hastings and the repetition of the testimony of various miscellaneous witnesses, some of whom had testified in one case and others in another, but never all in one case to make a complete record, and in addition to a complete deposition on all the facts by Hastings supported by the new, dated documentary evidence, there was produced in this record for the first time the following: The original Hastings blower (Exhibits 22B-22F), used as the means for producing the forced draft circulation in this Muskogee incubator. This was located near Muskogee on the farm of Hastings' partner, Lieber. It was produced and photographs of it appear in the record of this case. This is new evidence. (Vol. II, pp. 1113-14, Exhibits 22B-22F.) It was developed here, and in this record, for the first time, that *in 1926 Smith had his man Taggart try to buy this blower used by Hastings in this Muskogee prior use. Taggart admitted that Smith knew of this use as early as 1923. Taggart's excuse for trying to get possession of this blower from Lieber was that petitioner Smith wished to create a "museum" of previous efforts.* (Taggart, Vol. I, pp. 662-5; Lieber, Vol. I, pp. 603, 604, 607, 610, 616.) *Keystone Driller v. General Excavator Co.*, 290 U. S. 240.

As to the new witnesses, there was Hickox, at present an executive of an electrical concern in Chicago, who

was commercial agent for the electric power company in Muskogee, and as a part of his duties frequently saw the Muskogee incubator in operation, wrote articles about it to promote the sale of electric current, and had photographs taken of it. He produced his original scrapbook with these original photographs, the type-written copy of his article and the newspaper and magazine clippings showing the local and national publication of his articles. (Vol. II, pp. 1121-1130. Exhibits 26-A-26G.) This record proof, as well as other photographs and publications, were identified by both Hickox and a new witness Peabody, who at that time was the electrical contractor who installed the electrical equipment in this Muskogee incubator. He testified as to the installation of the blower mentioned above. Peabody is now an executive of the Westinghouse Electric & Mfg. Co. Neither Hickox nor Peabody had any interest in the litigation.

Another new witness was C. T. Brewer, a retired United States Postal employee, who had been a customer of Hastings' Muskogee incubator, testifying Hastings hatched over a thousand eggs for him. (Vol. I, pp. 639-40.)

Another new witness was Van D. Campbell, a hatcheryman, who as a young man, visited with his parents Hastings' incubator when Hastings was hatching eggs for his parents. (Vol. I, pp. 642-44.)

Lieber testified completely for the first time. (Vol. I, pp. 602-634.) He was Hastings' financial backer and partner. His testimony was not before the Sixth or Third Circuits.

L. W. Pitts' testimony (Vol. I, pp. 634-638) was not before the Sixth or Third Circuits.

In addition to the foregoing, new publications in the national press were produced, such as "Reliable Poultry Journal," of April, 1918 (Exhibit 20, Vol. II, pp. 1106-

1109); "Popular Mechanics Magazine" of November, 1912 (Exhibit 24, Vol. II, pp. 1117-1119), and "Electrical World" of July 6, 1912 (Exhibit 25, Vol. II, p. 1120). The new witness Hickox furnished the photographs and descriptive matter upon which the Electrical World article was based.

The new witnesses in the instant case and the new record evidence, plus the presence in this case of the complete testimony of all previous witnesses, some of whom appeared in one case and some in another, conclusively answer the questions of previous Courts, both as to construction and operativeness of this prior use. Consequently, the Court of Appeals for the Second Circuit was able to state that for the "first time" these prior uses were "fully presented and substantiated."

In addition to the foregoing witnesses, the plaintiff's own witnesses admitted the existence and operation of the Muskogee prior use, such as Cory, Shanafelt, Ward, and others. (Vol. I, pp. 644-62.)

In view of the tremendous number of law suits[1] brought by petitioner against hatcherymen throughout the United States after the decision of the *Snow* and *Waxham* suits, and, in view of the fact that the record now before this Court is complete on the vital new issue of infringement as to whether "separate hatching" is an infringement of this patent which petitioner is still further now trying to expand, we submit to this Court this question so that, if it does not agree with us that this patent is invalid in view of these new Hastings' defenses, then it will find that respondents' new apparatus and new method are not infringements of the Smith patent. We believe, however, the anticipation of the Smith patent is so conclusive, that the considera-

[1] Three hundred and fifty-eight suits were reported in the Official Gazette up to September 8, 1936.

tion of this second question will be unnecessary. The Court of Appeals of the Second Circuit did not pass on this infringement question for that reason, although it was briefed and argued before it.[1]

Summary of Argument

Hastings' publications show lack of inventorship in Smith, and corroborate the prior uses of Hastings. The Hastings' prior publication "The Dollar Hen" of 1909 publicly taught the use of an insulated cabinet, in which eggs of all ages would be kept to be incubated and hatched. The eggs were to be arranged on trays in stacks and a continuous current of air was to be blown by a fan over the eggs of different ages in a circuit for controlling their heat. The temperature of the air was to be controlled, the moisture content of the air controlled and the inlet of fresh air controlled. This showed lack of inventorship in Smith, under Sec. 4, U. S. R. S. 4920, Title 35, Sec. 69, U. S. C. A.

Hastings thereafter built and operated successfully an incubator having these principles for Walter B. Davis, of Brooklyn, New York, in the spring of 1911; and filed a patent application disclosing these principles on May 3, 1911, which later became abandoned in 1913 because he did not have finances to appeal from the Patent Office decision that the prior patents on heating and ventilating of rooms was an anticipation of his invention. Hastings took the same position as to this prior art that this Court took as to the same kind of prior art in *Smith v. Snow*, 294 U. S. 1, but the Patent Office overruled him. If it had not, he would have had the patent instead of Smith.

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[1] Cole et al v. Ralph, 252 U. S. 286; Langnes v. Green, 282 U. S. 531; Story Parchment Co. v. Paterson Parchment Paper Co., 282 U. S. 555; Stelos Co. v. Hosiery Motor-Mend Corp. et al, 295 U. S. 237.

In the fall of 1911, Hastings went to Muskogee, Oklahoma, built and put into operation in the spring of 1912 the Muskogee prior use which practiced his ideas that again anticipated the Smith construction and method of operation of a forced draft of air driven by a fan over eggs of different stages of incubation and hatching. This prior use continued into 1913. Smith started his experiments in the winter of 1912-13,[1] and filed his application October 26, 1916. These Hastings prior uses were successful in hatching large percentages of chicks during several hatching seasons for thousands of customers involving the handling of thousands of eggs. Publications describing and illustrating these prior uses in themselves show lack of inventorship in Smith and invalidity of his patent. Smith, as his own witness admitted, knew of this prior use of Hastings and in 1926 tried to buy the Hastings blower used at Muskogee. Smith was not called to rebut this proof of his knowledge of this prior use.

Respondents do not infringe because their incubators do not hatch eggs in their incubator as called for by the claims—they are separately hatched so that there is no "hatching" in respondents' machines. The eggs are removed at the beginning of the last three days of the twenty-one day period from the incubator and placed in a machine that is not charged to be an infringement. The heat of the hotter eggs of the last three days is 180 per cent of the heat of the first 18 days. The eggs are removed from respondents' incubator and their heat is not transferred to the cooler eggs. This eliminates the problem of handling this heat. It permits special treatment during the last three days by different temperature and moisture conditions than applicable to incubating eggs

[1] Buckeye v. Wolf, 291 F. 253, 259.

because of the different physiological condition of the eggs. "Separate hatching" reduces bacillary white diarrhea, which is increased by forced draft machines when used at hatching time. The respondents in their incubator do not have a forced draft of air in a continuous circuit, but have flat-bladed stirrers at the top and bottom of the cabinet for churning and agitating the air, as in the case of the Petersime and Blum machines held not to be infringements by the Sixth Circuit Court of Appeals.[1]

ARGUMENT

Point I

Hastings Publications and Prior Uses Anticipate the Patent in Suit

Hastings wrote the book, "The Dollar Hen," in 1909, which disclosed the apparatus and method of the Smith patent. He put his ideas into practice at Brooklyn, New York, in the fall of 1910 and spring of 1911. He filed a patent application on May 3, 1911. He again put his ideas into practice on a major scale in a 30,000-egg incubator at Muskogee, Oklahoma, starting in the fall of 1911. The hatchery operated during the hatching seasons of 1912 and 1913. Numerous local and national trade publications carried descriptions and photographs of the Oklahoma incubator. Petitioner's witnesses admitted the existence, construction and operation of the Oklahoma prior use. Smith tried to buy its blower in 1926 for $50.00 because he knew of that prior use.

The chief complaints against this prior use by petitioner are that it was not a financial success, its air

[1] Buckeye v. Petersime, 19 F. (2d) 721-722; Buckeye v. Blum, 17 F. (2d) 459.

speed was too low, that the percentages of hatch on the average were not as large as in modern incubators after more than a quarter of a century of refinement, that the eggs were of different ages in the stacks and the incubator was not a success. The operation of this incubator for two hatching seasons with 1,500 to 2,000 customers handling as high as 25,000 eggs at a time, as stated by petitioner's witness Lieber in a deposition offered in this case is ample answer to those objections. Other witnesses of petitioner admit its construction, operation and hatching. There can be no denial of the prior use of the two factors of stage incubation and a fan driven continuous current moving in a circuit over the eggs to move the heat of the hotter to the cooler eggs in a single room.

For the first time in any case, the Hastings' prior use at Muskogee, Oklahoma, is based upon exhaustive contemporary record evidence comprising both original descriptions made at the time by an eye witness, Hickox, and photographs taken under Hickox's direction at the time. There are also presented printed publications in the national and local press fully disclosing the construction and operation which Judge Bodine declared as indicating complete anticipation. There is offered here the testimony of Hickox,[1] the Muskogee Electric Light Company representative in 1911-12, who photographed and wrote up the Hastings Muskogee incubator, and Peabody, the latter being the electrical contractor that installed the electrical equipment in the Hastings incu-

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[1] Hickox and Peabody when they testified had no connection with this case. The former was at the time he testified connected with Curtis Lighting, Inc., manufacturers of lighting equipment in Chicago. From 1910 to the fall of 1912 he was Commercial Manager of the Muskogee Gas and Electric Company. Peabody at the time he testified was Western District Merchandising Manager of the Westinghouse Electric and Manufacturing Co. at St. Louis, Mo. He had been an electrical dealer and contractor in Muskogee from 1910 to 1921.

bator. There is also in this record a large amount of new testimony from other witnesses[1] with the testimony of former witnesses.

The original blower used as the means for maintaining the forced draft circulation in this incubator was located and photographs of it appear in the record of this case alone. It develops here and here alone that *in 1926 Smith had his man Taggart try to buy this blower used by Hastings in this prior use and Taggart admitted that Smith knew of this use as early as 1923.* (Vol. I, p. 664.) The new witnesses and this new evidence conclusively answer the questions of previous Courts who found the proof insufficient both as to the construction and operativeness of this prior use.[2]

Hastings started with incubators on a large poultry farm in Illinois, later entered the Kansas State Agricultural College and was in charge of poultry at the Kansas Experimental Station operating incubators until 1906: in 1908 and 1909 he was poultryman for the United States Department of Agriculture, traveling extensively and visiting poultry plants and agricultural experiment stations operating incubators as an expert in the art of incubation.

(A) Hastings Publication Before His Prior Uses.

This publication has two uses in defeating the Smith patent. The first is that in itself it teaches all that Smith claims as his invention; the second is that it corroborates the facts of the Hastings prior use by a contemporaneous description and explains it publicly where it could be challenged if not true.

Hastings resigned in 1909 from the U. S. Department

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[1] Brewer, Van D. Campbell, Pitts. Vol. I, pp. 638, 642, 634.

[2] Hastings' testimony answers each one of the queries in previous decisions as to points that were not clear to the Judges below. Vol. I, pp 529-36.

of Agriculture to write his book "The Dollar Hen."[1] His ideas originated from a ventilating engineer.[2]

He said in "The Dollar Hen":

> "* * * In a large and properly constructed hatchery, such as is discussed in the last section of this chapter, *the entire composition of the air, as well as its movement, is entirely under control.* Nothing has yet been brought to light that indicates any particular attention need be given to the composition of such air save in regard to its *moisture content, but as the control of this factor renders it necessary that the air be in a* **closed circuit,** and not open to all outdoors, it will be very easy to subject the air *to further changes such as the increasing oxygen,* if such can be demonstrated to be desirable." (P. 95.)
>
> "The writer now wishes briefly to describe the plan of construction and operation of *a new type of hatchery,* the success of which has recently been made feasible by inventions and technical knowledge hitherto unavailable. The plan of the hatchery is on that of a cold storage plant as far as insulation and general construction go. The eggs are kept in bulk in special cases which are turned as a whole and may rest on either of four sides. **At hatching time** the eggs are spread out in trays in a special hatching room, which is only large enough to accommodate chicks **to the amount of one-sixth of the incubator capacity, for twice a week deliverings, or one-third if weekly deliveries are desired."**
>
> "There are no pipes or other sources of heat in the

---

[1] Respondents' Exb. 13, pp. 95; 104-106 of the exhibit.

[2] "* * * As to whether I got the basis for my ideas on incubation from one Madison Cooper, a refrigerating and ventilating engineer, my study of the art of refrigeration, in connection with my employment in the United States Department of Agriculture, led me into a knowledge of Mr. Cooper's method of using a fan circulation of air for the purposes of equalizing temperature in refrigeration. * * * That was before I wrote the book entitled 'The Dollar Hen.' I think I was still in the Department of Agriculture. I think that was late in the year 1908 when I visited Mr. Cooper." (Vol. I, pp. 539, 540.)

egg chambers. *All temperature regulation is by means of air heated* (or cooled as the case may be) outside of the egg rooms and **forced into the egg rooms by a motor driven cone fan, maintaining a steady current of air,** *the rate of movement of which may be varied at will. The air movement maintained will always be sufficiently brisk, however, to prevent an unevenness of temperature in different parts of the room.*
* * *

"* * * In contrast with these blundering instruments we now have available an instrument with which the writer has frequently determined vapor pressure accurately to within a range of two or three vapor pressure units and the instrument is capable of being constructed for even finer work.

"As it is only by means of *air with the moisture content absolutely controlled that the use of a large room becomes possible,* we can now see why this type of hatching remained so long undeveloped. By means of such vapor pressure control the large egg chamber is not only feasible, but the rate of evaporation at once becomes subject to the control of the operator and we achieve a perfection in artificial incubation hitherto unattained.

"The means by which the air moisture is regulated is similar to that used in up-to-date cold storage plants where the air is made moist by sprinkling and dried with deliquescent salts. The regulation of vapor pressure, like that of temperature, may be by electrically moved dampers which switch a greater or less proportion of the incoming current to the sprinkler or dryer as the case may be. The ordinary incubator thermostat gives the necessary impulse for the control of the temperature dampers, while the instrument above referred to is used for the vapor pressure control.

"*As the entire air circuit it closed,* the chemical composition of the air may also be regulated at will. *This results in a reduction of the quantity of heat required to a minimum;* in fact, with the incubator in full swing,

the air will, at times, need cooling rather than warming." (Pp. 104-106.)

In this first paragraph of "The Dollar Hen" quotation Hastings taught the industry the idea of the control of moisture without undue loss in an incubator by complete control of the air "in a closed circuit" and the admission of fresh air, i. e., "increasing oxygen." The admission of fresh air necessarily entails the escape of foul air in the cabinet to make room for the fresh air.

In the second paragraph he taught stage incubation by setting eggs of different ages in the same chamber so as to secure "twice a week deliverings" or "one-third if weekly deliveries are desired."

He taught the use of an insulated room as an incubator such as used in cold storage plants where the walls are insulated.

In the third paragraph he taught "All temperature regulation is by means of air heated (or cooled as the case may be) * * *." Smith also practices cooling his eggs when they get too hot. (Vol. I, p. 156.) In this same paragraph he described the air as "forced into the egg rooms by a motor driven cone fan, maintaining a steady current of air, the rate of movement of which may be varied at will. The air movement maintained will always be sufficiently brisk, however, to prevent an unevenness of temperature in different parts of the room." Here again is taught maintaining even temperature amongst eggs of different ages by a continuous current of air moving over the eggs by a motor driven fan moving the air in a continuous circuit—the Smith invention as claimed.

In the fourth, fifth and sixth paragraphs he teaches the use of moisture and heat absolutely and automatically controlled in a large room by dampers due to the

recent development of new instruments for the control of moisture and temperature.

In the seventh paragraph Hastings again emphasizes that "the entire air circuit is closed" and that the composition of the air is controlled at will as driven by the fan in the closed circuit. He says "This results in a reduction of the quantity of heat required to a minimum," which shows he understood the use of the heat generated by the eggs which could be used to reduce artificial heat by a fan driven "steady current of air" so that as he says "The air movement maintained will always be sufficiently brisk, however, to prevent an unevenness of temperature in different parts of the room."

Here is a complete disclosure of the use of forced draft and staged incubation in the method of incubating and hatching eggs. Mention being made of "twice a week" or "weekly deliveries" it follows necessarily that the eggs in the egg room would have to be of different ages or placed in staged incubation and the motor driven fan furnished the forced draft circulation in order to maintain an even temperature.

In the brief of the petitioner before this Court in the *Snow* case, it was claimed that the essence of the Smith invention was stage incubation and forced draft in a continuous current in combination. (P. 17.) This Court so found, as we understand it. The same claim has been made in this case.[1] In the Hastings "The Dollar Hen," published in 1909, a complete disclosure is made of this identical combination of staged incubation and forced draft in one room. Therefore, it is impossible for the petitioner to claim that he was the first discoverer or

[1] In petitioner's brief in this case (p. 15) he adds the further limitation that "the eggs in staged incubation must be set in one room" as a basis for later argument that the Hastings Muskogee prior use did not have eggs of all ages in one room.

DAVIS HATCHERY OF BROOKLYN, N.Y.

FIG. 1.

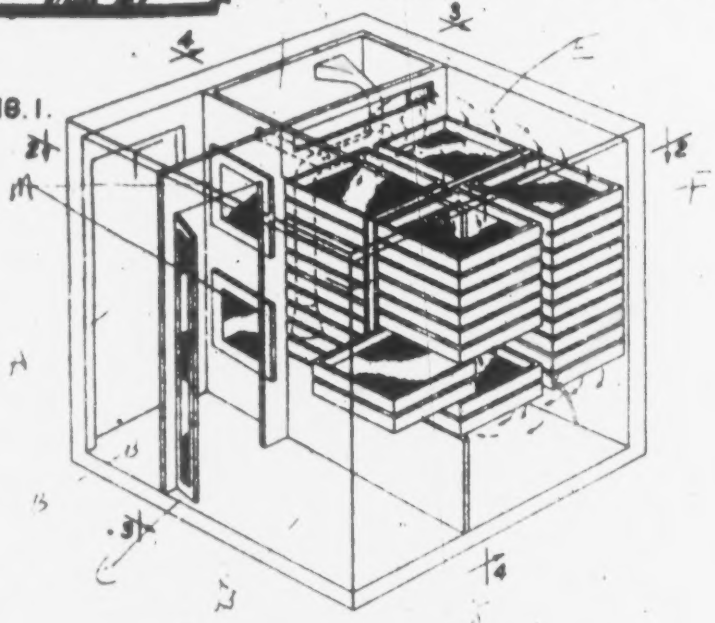


FIG. 2.

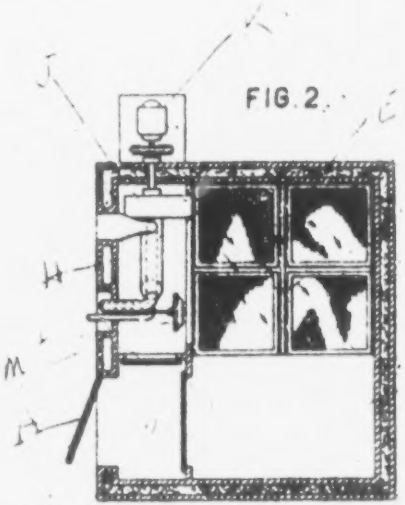


FIG. 3.

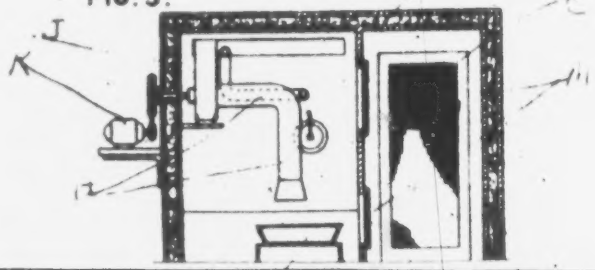
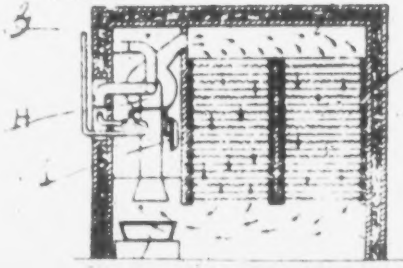


FIG. 4.



inventor of the idea of the combination in 1916, the year of the filing of his application.

This publication of "The Dollar Hen" is an anticipation by its disclosures of the Smith patent and was so pleaded. (Vol. I, p. 10.)[1] The evidence of subsequent Hastings prior uses putting to practice these teachings also shows in the light of this publication that the author of the publication, and not the patentee Smith was the first and original inventor and that the Smith patent is therefore void.[2] The fact that the disclosure of the publication at that time in 1909 had not been reduced to practice does not militate against this publication standing by itself as a complete disclosure to defeat the patent.[3]

(B) Hastings 1910-1911 Prior Use at Brooklyn, New York: Davis Installation.

Hastings built and operated during the season of 1910 and spring of 1911 a 6,000-egg incubator for Walter B. Davis at his country home on Kings Highway, Brooklyn, New York, embodying in this operative machine his ideas disclosed in "The Dollar Hen." The accompanying drawings prepared under the supervision of Hastings illustrate this incubator.[4]

The eggs in this Davis incubator were arranged in superimposed trays in an insulated box 6 feet by 6. A door "A" led into an ante-chamber B from which the door C large enough for a man to enter opened into chamber D in which the superimposed egg trays F were

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[1] Bone v. Marion County, 251 U. S. 134, 144.
Cohn v. United States Corset, 93 U. S. 366, 377.
Seymour v. Osborne, 11 Wallace 516, 555.
Downton v. Yeager Milling Co., 108 U. S. 466, 477.

[2] Corona Cord Tire Co. v. Dovan Chemical Corp., 276 U. S. 358: R. S. U. S. 4886.

[3] Pickering v. McCullough, 104 U. S. 310, 319

[4] Defendants' Exhibit No. 21—Rec. Vol. II, p. 1110, and Vol. I, pp. 507 to 512.

located. An even temperature was maintained by using a motor driven fan J to blow a blast of air into the compartment at the top of the egg chamber E which air blast passed downwardly through the egg trays in defined paths indicated by the arrows to a space below the four tiers of egg trays and thence it passed in a defined path over the heater H and returned to the top of the incubating chamber, making a complete cycle or circuit of air. The thermostat I governed the heater H. The circuit of air passed over a moisture pan L to control the humidity. This machine was operated through the hatching season of 1910 and 1911 and also during the next season.[1] It was operated by Hastings in 1910 and spring of 1911 for Davis and shown to a number of visitors. (R. 506-11, Vol. I.)

The principle and general construction of this machine of forced draft and staged incubation as installed at Brooklyn is illustrated and described in the Hastings filewrapper of his application filed on May 3, 1911, (Vol. II, pp. 727-764.) It follows the teachings of "The Dollar Hen." If the Davis incubator built and operated by Hastings at Brooklyn in the spring of 1911 had not proven successful, it is unreasonable to suppose that he would have gone to the expense of filing an application on May 3, 1911, at about the end of the spring hatching season in view of his financial condition, as he could not even afford an attorney to file his application. (Vol. I, p. 536.)

Based on his success at Brooklyn, Hastings got out a pamphlet entitled "A Million Egg Incubator" as the basis for his efforts to raise capital for a larger machine

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[1] This prior use has been more elaborately proved, in the case of Smith v. Hall, now pending before this Court than in this record. The primary discussion in this case of the Hastings prior use will be that practiced with an incubator similar in general principles at Muskogee in the hatching season of 1912 and 1913.

in Kansas-Oklahoma. This pamphlet contains photographs of the Davis machine and dated letters of recommendation from Davis, the owner of the Davis Poultry Farm in Brooklyn; Orvis, Editor of the "Poultry Digest" and others. It would seem contrary to reason that Hastings would publicly advertise the Brooklyn prior use with names and addresses of persons recommending him as his foundation for asking for additional capital for a bigger installation in Oklahoma unless the Davis installation was such a success in Brooklyn that it would stand investigation. (Petitioner's Exhibit I, Vol. I, pp. 554, 581.) These are the photographs and publications referred to by the Court of Appeals of the Second Circuit.

(C) Hastings Patent Application Proof of Prior Invention and Prior Uses.

Under this branch of the case the proof shows two things:

(a) Hastings was a prior inventor to Smith on the issue of prior inventorship.

(b) Hastings had the invention at the time of the prior uses at Brooklyn and Muskogee and that the incubator of these prior uses embodied the ideas of his pending patent application.

Hastings filed a patent application on May 3, 1911, which was prepared by himself.[1] It read as follows:

"My invention is that of a hatchery in which I secure better ventilation and a more uniform temperature throughout the hatching chamber *by substituting a forced draft for gravity drafts.* I attained this end by the mechanism illustrated in the accompanying drawing. This represents a vertical section of the hatchery, in which *A is a hatching chamber wherein*

[1] Petitioner's Exb. I—Vol. II, p. 727.

are the eggs placed, B is an electric fan which is to run constantly, maintaining a steady current of air through the hatching chamber, C is a heater, D any uniform or regulated source of heat. I use a gas flame, the pressure of which is controlled by a governor, EE are fabrics or perforated partitions for the purpose of causing an even horizontal distribution of air throughout the hatching chamber.

"I believe it to be *best to cause the air to enter the hatching chamber from above, but my invention is not limited to any particular circulation or movement of the air* and by the use of the fan the gravity drafts may be overcome and the air caused to move in any desired direction.

"*Ventilation I secure through cracks* around the door of the hatching chamber or *other small openings in any part of the air circuit.* The air being constantly in motion, requires less rejuvenation than dead air.

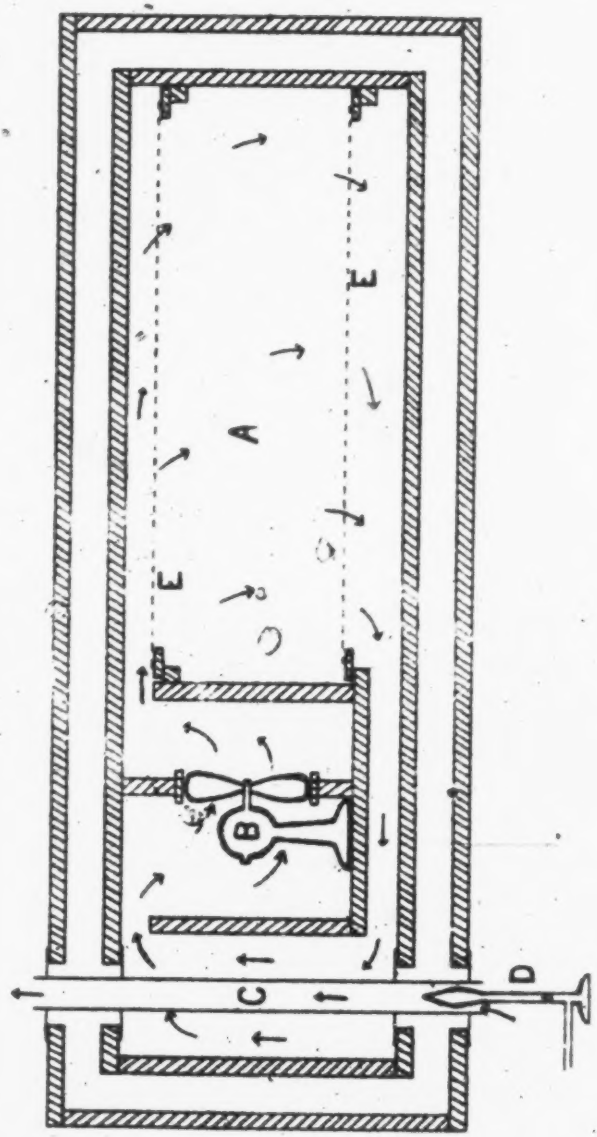
"*The part of my apparatus that is new,* and which has not before been used in connection with hatching devices, *is that of the fan,* and this I maintain to be of distinct utility in securing uniform ventilation and an **even temperature** *throughout all parts of the hatching chamber.*

"I claim: The combination in a hatchery for the eggs of domestic fowl, of a room or chamber for holding eggs to be incubated and a *fan pump, or other mechanical device with moving parts for causing a circulation of air in or through such chamber.*"

This application was witnessed by Walter B. Davis, and Isabel E. Carkhuff (later Mrs. Davis), at whose home the apparatus of the application had been reduced to practice as above described in the Brooklyn prior use. (See Vol. II, pp. 727, 764.)

The Court will observe that the diagram has precisely the elements of the Brooklyn Davis and Muskogee uses —even to the arrangement of the heater, the fan, the course of the air circuit, etc. His statement that he was

FROM PETITIONER'S EXHIBIT I



WITNESSES

Walter B. Davis.

Isabel E. Eschhuff.

INVENTOR.

Milo Hastings

BY

ATTORNEY.

going to produce an even temperature shows the eggs were of different ages, i. e., stage incubation. **The only source of uneven temperature would be eggs of different ages.** He proposed to control the fresh air inlet and therefore the escape of foul air to make room for it by "small openings in any part of the air circuit."

The Patent Office rejected Hastings on the ground of lack of invention because it was the application of a forced draft of air in a circuit, old in heating and ventilating patents, and there was no invention in substituting such old heating and ventilating patent structures as in an incubator where eggs were treated instead of some other material. Hastings insisted that this was invention. The Patent Office Primary Examiner and the Board of Appeals by a majority of 2 to 1, held it was not invention. One of the three members of the Board dissented and held that it was invention. The claim that Hastings appealed upon with the aid of an attorney, read as follows:

> "A hatchery for eggs embodying an incubating chamber adapted for the reception of superposed trays for eggs to be incubated, whereby said eggs will be arranged in layers one above the other, means for effecting a distribution of air uniformly to the eggs in the chamber, means for heating the air, and *mechanically operated means for forcing a uniform circulation of air* through all parts of the chamber and past the heater, whereby convexion currents will be eliminated, *temperature* and gaseous *stratification of the air in the chamber overcome*, and *the eggs subjected to the influence of air of the same temperature and composition.*"

The same problem that Smith claims he solved is disclosed in this application based on Hastings' statements, by his attorneys, Church & Church:

> "The problem presented to applicant was one which finds no analogy in the small incubators such as are commonly used throughout the country, for in them the chamber is of such small size and the eggs located so close together in a vertical direction that the disturbing influences due to convexion currents and air stratification amount to nothing. *It is well known that eggs during the process of incubation exert a very marked influence on the air surrounding them, as the temperature of the eggs themselves varies in accordance with the stage of their development* and the gaseous emanations tend to produce vitiated conditions which exert a marked influence upon the eggs themselves, and especially upon adjacent eggs, **if the eggs are at different stages of their development.** * * *" .

After stating, on May 24, 1912,[1] when they made these statements, that they had examined a mass of data and information, "derived from a practical hatchery of large capacity which is being operated by the applicant," they submitted that the applicant had "by a painstaking and very costly series of experiments discovered that the temperature and gaseous stratification in the incubating chamber must be overcome by a mechanically forced circulation of the air which will insure a correct and uniform influence of the air upon all of the eggs in the incubating chamber, and **this forced circulation must be such as to overcome the counteracting influence of the eggs upon the air when said eggs are in the different stages of incubation.** This feature has seemingly never been effectually worked out by investigators along this line prior to applicant, and it seems to the attorneys to present all of the characterstics of a patentable invention of the highest order."

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[1] The Muskogee prior use described hereafter was then an accomplished success.

And these same attorneys in their brief before the Board stated:

> "The problem has been to enable the incubating operations to be carried on continuously, if so desired, **with eggs at all stages of development,** and with all of a vast number of eggs subjected to the same temperature and atmospheric conditions best adapted for the development of the embryo. * * *
>
> "During the incubating process the eggs themselves, especially if assembled in large numbers close together, exert a most marked influence upon the surrounding air, both with respect to temperature and composition, and owing to their inherent temperature changes, they exert a most marked influence upon adjacent eggs due to radiation. * * *
>
> "* * * The simple way in which applicant overcame the difficulty was through the provision of a **mechanically operated air forcing means which would force a rapid circulation of air through the whole collection of eggs in the chamber and past the heater.** The mechanical air forcing means is an essential factor, if heat is to be conserved and the conditions maintained uniform; for a circulation, which is due to differences in temperature in different portions of the circulatory system, as, for example, where the air is circulated by the effect of the heater in causing the heated air to rise and pass into or through the incubating chamber, will not answer for large collections of eggs. * * *" (Vol. II, pp. 752-4.)

This brief was based upon and quotes disclosures by Hastings to the same effect.

This brief on behalf of Hastings by Church & Church would be a perfect brief on behalf of Smith. Compare Hastings' argument which he himself made before having an attorney, before the Patent Office, that prior ventilation patents were not analogous art, with the find-

ing of this Court.* Hastings, receiving the adverse two to one Board decision made March 11, 1913, had insufficient funds to carry the matter further. (Vol. I, p. 536.) If the Patent Office had rendered the same judgment as this Court, Hastings would have received the patent and not Smith.

At page 64 of petitioner's brief he tries to make it appear that Mr. Melville Church's reference in his amendment to the Hastings' application that "up to the present time, hatcheries of large capacity have proven to be practical failures," refers to the incubator of the Hastings application. This would make Mr. Church unfaithful to his task of prosecuting the application because, if accepted, it would mean that he was discrediting the then Hastings invention. That contention is without merit.

This abandoned application is relied upon as proof of the Hastings inventorship and use, under a doctrine

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***Hastings Filewrapper Statement on Prior Art.**

"These patents refer to the use of forced ventilation for purposes unrelated to incubation. The use of a forced draft in combination with an incubator I contend to be patentable, as it is a distinctly new use of a well known mechanical device, which in its new use required invention to reach and which has distinct utility.

"To contend that the new use is not patentable because passages for natural drafts exist in well known types of incubators is unsound; thousands of well known patents including the two cited by your examiner would be thrown out by a similar line of reasoning. There are scores of existing incubator patents based upon the form of these natural draft passages, and I maintain that the introduction of a device for generating a force draft to be of far greater uniqueness and utility than the varying designs for utilizing natural drafts." [Statement by Hastings in 1911 to Patent Office before he secured an attorney. Vol. II, p. 736.]

Supreme Court Statement on the Prior Art.

"The Proctor & Knowles patent, No. 426,321, of 1890, and the Schwartz Patent No. 535,175 of 1895, for methods and apparatus for conditioning tobacco and other materials, as well as other procedures for ventilation, are so remote from the problems and procedure for hatching eggs as to call for no comment." (Smith v. Snow, 294 U. S. p. 17.)

summarized by Walker on Patents, Sixth Ed., Sec. 98, p. 123, as follows:

> "Sec. 98. When there is evidence that he who made and abandoned an application for a patent, made also some effort to carry his invention into practical use, then that application is admissible in evidence to aid the court to determine the date and the nature of the invention which was sought to be embodied in a working form."

This Hastings application shows that the patentee Smith "was not the original and first inventor or discoverer or any material and substantial part of the thing patented." Rev. Sts. Sec. 4920, amended March 3, 1897, c. 391, Sec. 2, 29 Stat. 692. As this Court has said relative to the filing of an application as a showing of prior inventorship "one really must be the first inventor in order to be entitled to a patent. *Coffin v. Ogden,* 18 Wall. 120." In this same case of *Alexander Milburn Co. v. Davis, etc., Company,* 270 U. S. 390, 399-402, Mr. Justice Holmes observed:

> "A description that would bar a patent if printed in a periodical or in an issued patent is equally effective in an application so far as reduction to practice goes."

And in *Loom Co. v. Higgins,* 105 U. S. 594:

> "* * * An invention relating to machinery may be exhibited either in a drawing or in a model, so as to lay the foundation of a claim to priority, if it be sufficiently plain to enable those skilled in the art to understand it."

Hastings did not write out his description and make his drawings to keep them "in his portfolio uncommun-

icated to anyone," but he complied with the law by promptly seeking his patent through a vigorous prosecution of it before the tribunals of the Patent Office, despite his finances. He openly published his proposals in many publications before and after his application was filed. He showed large numbers of people in Brooklyn and Muskogee his reductions to practice.

The fact that Hastings was **prevented by the action of the Patent Office from securing a patent,** which, if it had been granted, would have prevented the allowance of the Smith patent, should not be held against Hastings, as that was the result of the Patent Office action, which was not his fault. In an analogous situation in *Alexander-Milburn v. Davis,* 270 U. S. 401, this Court said in dealing with the anticipatory effect of a prior filed application as showing lack of inventorship and as showing constructive reduction to practice:

> "* * * The delays of the Patent Office ought not to cut down the effect of what has been done. The description shows that Whitford was not the first inventor. Clifford had done all that he could do to make his description public. He had taken steps that would make it public as soon as the Patent Office did its work, although, of course, amendments might be required of him before the end could be reached. We see no reason in the words or policy of the law for allowing Whitford to profit by the delay and make himself out to be the first inventor when he was not so in fact, when Clifford had shown knowledge inconsistent with the allowance of Whitford's claim, * * *"

In the *Milburn* case, the earlier filed application matured into a patent without the claim to the subject-matter in controversy, but the principle remains the same that this Hastings application would have been issued if the Patent Office had taken the same view of the law on the

prior art that this Court later said was the correct one. We rely upon the Hastings application because it negatives inventorship in Smith, the Corn Planter Patent, 90 U. S. 181, 23 Wall. 181; because it is proof of a constructive reduction to practice establishing the date of invention, and is corroborative of the nature and fact of the invention which Hastings reduced to practice in Brooklyn and Muskogee.[1]

Therefore, the Hastings application is a constructive reduction to practice, corroborating proof not only of the actual reduction to practice by Hastings, but also in its own right a constructive reduction to practice. It is proof of prior inventorship under Subdiv. 4, Sec. 4920 R. S. as evidence that the patentee Smith "was not the original and first inventor or discoverer" of the incubator and method patented.

(D) Hastings Muskogee, Oklahoma, Prior Use.

In the fall of 1911 Hastings went to Muskogee, Oklahoma, during the boom in that territory, soliciting aid to build a mammoth incubator embodying his ideas of forced draft and stage incubation. In company with John G. Lieber, a lawyer and business man of Muskogee, and a third party named Ed. Hastain, a corporation was formed and a 30,000 egg capacity incubator built in Lieber's building during the latter part of 1911, was put in operation early in the hatching season of 1912 and ran through that season and the hatching season of the next year, 1913, as well. (Vol. I, pp. 512-607.) The same principle of forced draft and staged incubation was employed in the Muskogee as in the Brooklyn incubator,

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[1] Miller v. Walker (C. C. E. D. Pa.) 138 Fed. 919, 920, 922; U. S. Blind Stitch, etc., v. Reliable, 67 Fed. (2d) 327 (C. C. A. 2); Lemley v. Dobson-Evans Co., 243 Fed. 391 (C. C. A. 6), affirmed Milburn v. Davis, 270 U. S. 390.

but on a larger scale. Hastings testified: "The general plan of construction and the principle of operation [of the Muskogee incubator] were quite similar and in accord with those of the Davis incubator, such changes as were made were wholly the matter of expediency in adapting the construction of the building space available and because of the larger capacity of the Muskogee incubator." (Vol. I, pp. 512-3.)

There is no rebuttal in the record as to these facts: that this incubator existed, was operated with staged incubation and fan draft, hatched during one season and part of another and was constructed as claimed. The depositions of the petitioner, Anderson, Lieber (also called by respondent), Hogan, Pitts, and Shanafelt, Cory and Ward (Vol. II, pp. 765-791; Vol. I, pp. 644-662), prove the building and operation of this Muskogee incubator. Petitioner's witness Samuel J. Ward, after saying that the Hastings incubator produced about a fifty per cent hatch, said:

> "I am positive that from my visits to this plant where Mr. Hastings was operating, that the thing was actually in operation and did hatch eggs, regardless of the percentage of the hatches. Yes, sir. And that was throughout the hatching season of the two seasons that I remember, and I think it was in 1911 and 1912."[1]

Photographs were taken at the time of this prior use and articles appeared in newspapers and technical publications carrying these photographs, describing this incubator, so that its operation and existence does not depend upon unsupported verbal testimony, but upon unusually full dated documented proof to a degree far

[1] Rec. Vol. I, p. 661.

beyond the record before any other Court considering this prior use.

In addition to Hastings' own testimony, the writer of some of the articles, Norman B. Hickox, who was commercial manager for the local electric light and power company in Muskogee at the time, and A. D. Peabody,[1] who was the electrical contractor who installed the electrical equipment of the incubator including the fan and blower, were called and testified. Hickox produced his own scrapbook of photographs made under his direction, a description drawn up by him at the time, and articles written by him in 1912,[2] and photographs of the fan, installed in the incubator are also in the record. The second blower to increase air flow was produced and photographs are in this record.[3] John G. Lieber, L. W. Pitts, C. T. Brewer and Van D. Campbell testified as to being familiar with the Hastings Muskogee incubator, that it was an operative machine and was run through two hatching seasons producing commercial hatches. We reproduce here photographs from the Hickox album taken in 1912 under Hickox's direction showing this incubator in actual operation at that time.

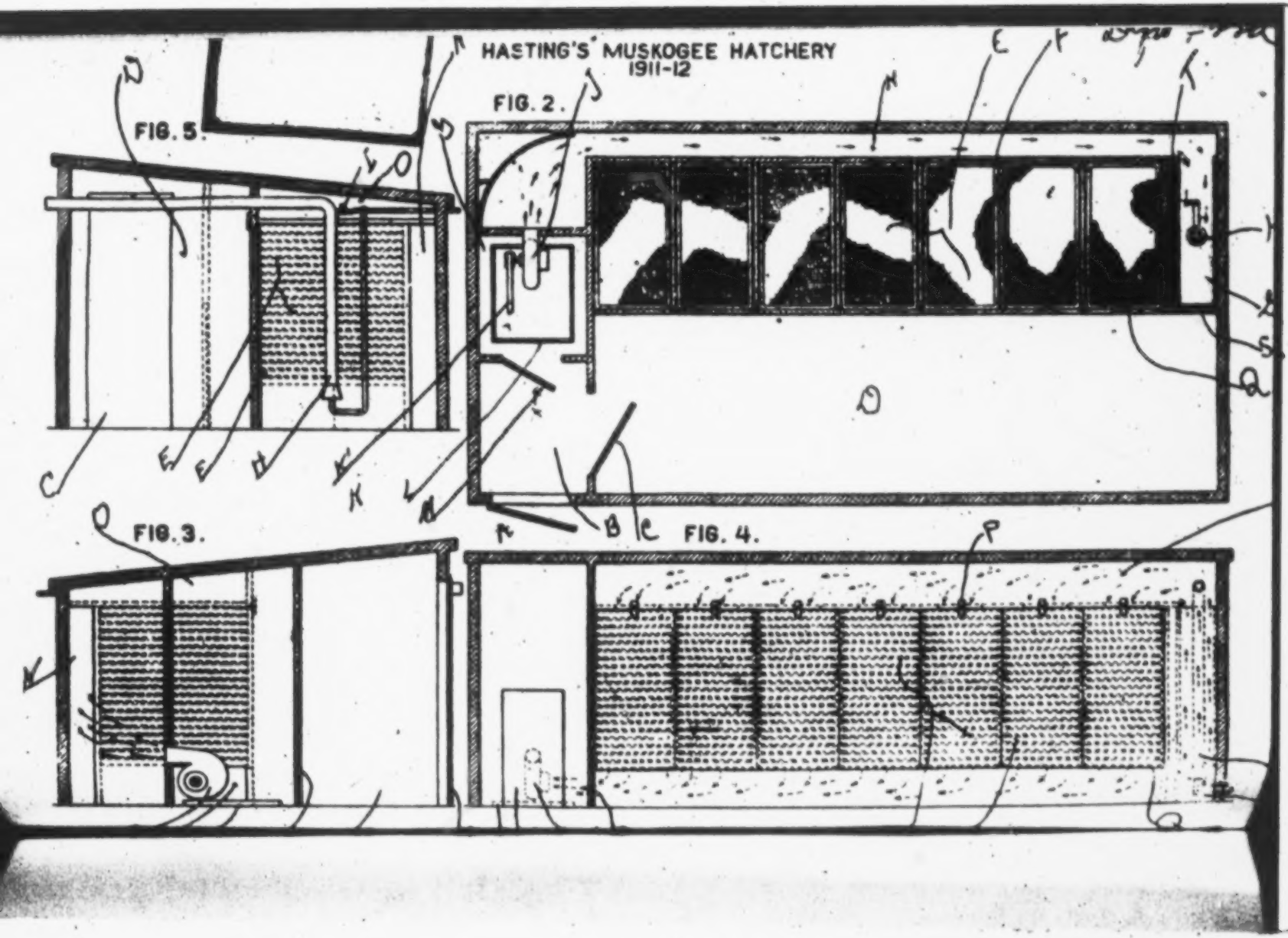
Based upon the photographs and published descriptions published at the time of the operation of the Hastings Muskogee incubator, assembly drawings were made up, showing the complete machine as embodying forced draft circulation and staged incubation.[4] These drawings are identified as correctly showing this incubator by Hastings, the inventor of the construction, Lieber who furnished the money to build it, and Pea-

[1] These are new witnesses identifying new contemporaneous photographs and descriptions. They have no interest in the outcome of this suit.
[2] Defendant's Exhibits 26, and 26A to 26G, Vol. II, pp. 1121 to 1130.
[3] Vol. II, pp. 1113-14, Exbs. 22B-22F.
[4] Defendants' Exhibits 22 and 22A, Vol. II, pp. 1111-12.

body, the electrical contractor who put in the fans and other electrical work. Hickox testified he saw it in operation and had photographs taken of it in operation as a part of his duties and produced them with a description written at the time. (Vol. I, pp. 503-605.)

The testimony of these witnesses stands uncontradicted and agrees that the Hastings Muskogee incubator consisted of a large room in which there were a series of stacks of egg trays containing from 250 to 300 eggs per tray, each stack containing about 5,000 eggs of different ages. There was a corridor in front of the trays for men to work in, loading and unloading the trays. Moisture was provided by water pans. A fan blew an air blast over the water pans and thence through a passage behind and over the tray stacks and thence downwardly through the stacks of egg trays and back into the fan in a continuous circuit. This fan was made by the Emerson Electric & Manufacturing Company, with a normal speed of 1150 r.p.m. (Vol. I, p. 600.) The fan was found to give insufficient air, according to Hastings and the electrical contractor, Peabody, and a larger Sirocco blower made by the American Blower Company was substituted.

This blower has been found and photographs taken of it and the blower identified. (Defendants' Exhibits Nos. 22B and 22F, Vol. II, pp. 1113-14.) This was the Sirocco blower Smith tried to buy in 1926 because Smith knew of this prior use as his man Taggart admitted and wanted possession of this blower. He offered fifty dollars for it. (Vol. I, Lieber, p. 610, and Taggart, pp. 663-4.) Taggart admitted on cross-examination: "I first learned of the Hastings incubator being operated in Muskogee, I think in the spring of 1923. I learned of it in conversations with Dr. Smith." (Vol. I, p. 664.)

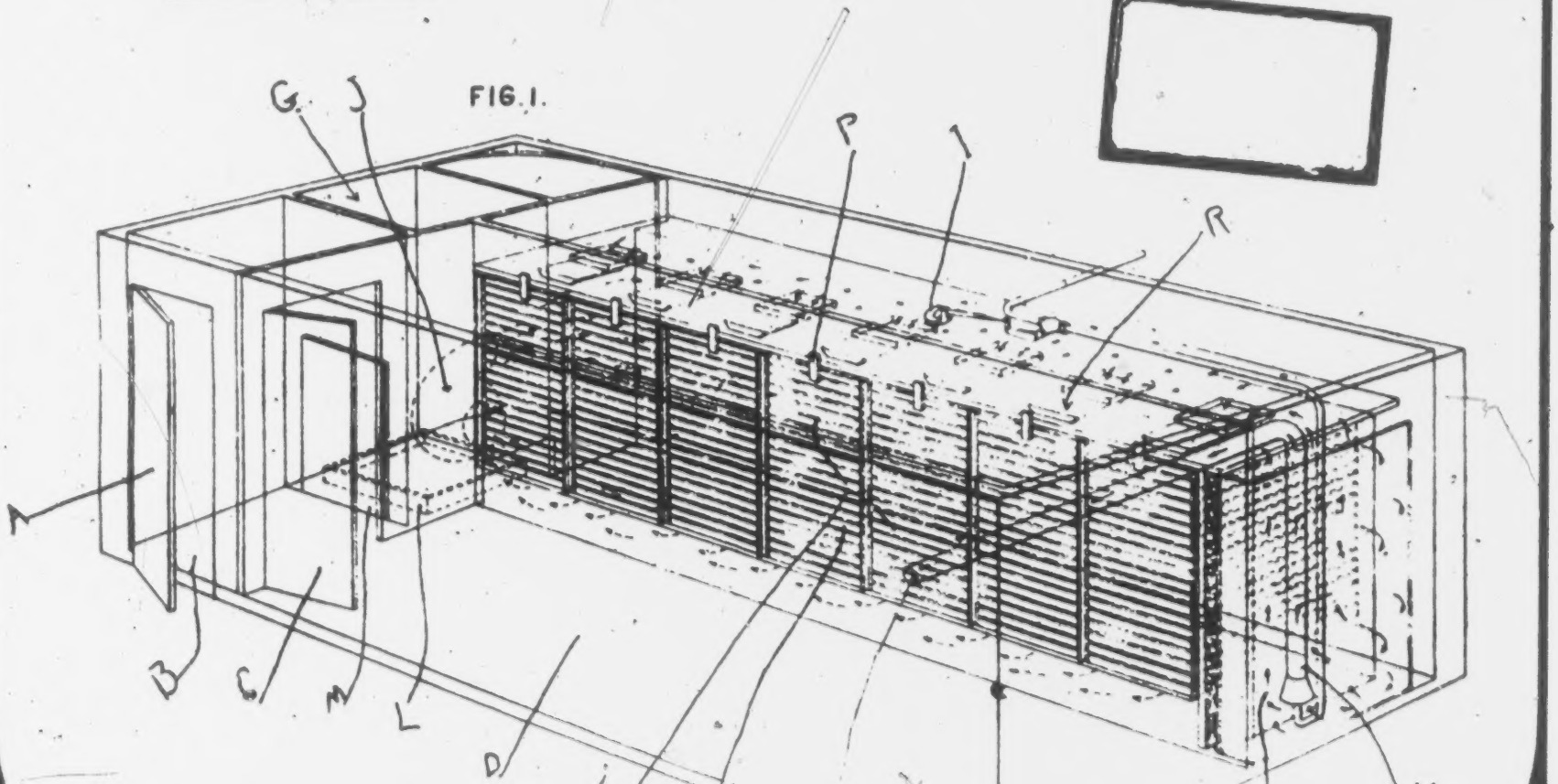

HASTING'S MUSKOGEE HATCHERY
1911-12
FIG. 2.
FIG. 3.
FIG. 4.
FIG. 5.

DEFENDANT'S EXHIBIT No. 22

HASTING'S MUSKOGEE HATCHERY
1911-12

Defts' Exhibit no 2

FIG. 1.



We reproduce Respondents' Exhibits 22 and 22A, drawings of Hastings' Muskogee incubator.

A door entered into the hatchery as shown on the drawings, marked "A." This led into an ante-chamber marked "B." A further door marked "C" led into a work room or corridor marked "D," where the workmen stood to handle the eggs and trays. The incubating chambers, of which there were seven, are indicated by the letter "E" and were separated by vertical partitions to guide the air downwardly through the eggs where it mushroomed on the floor and then returned to the fan or blower "J." The individual trays that slide into these chambers are marked "F." A chamber marked "G" contained a blower marked "J." At the opposite end of the hatchery is another chamber marked "G-1" which contained the heater marked "H." A thermostat marked "I" was also installed for the purpose of regulating the heat. A moisture pan marked "L" was located in the blower chamber. A passageway behind the incubating compartments, through which the air from the blower passed, is marked "N" and a passageway through which the air also passed and was distributed to the seven individual hatching compartments is marked "O." The circulation of the forced draft current of air impelled by the blower is shown by arrows. Openings with movable slides, marked "R," led from the chamber "O" into the seven individual hatching or incubating chambers. The purpose of these openings and the adjustable slides was to permit of the equal distribution of air from the forced draft of the blower to the individual hatching chambers and the slides were for the purpose of adjusting the flow of the air to each hatching chamber as operation required because the blower was at one end of the building. (Vol. I, pp. 514-5.)

The manner and method of the operation of this incu-

bator provided for the distribution of the heat to maintain equal temperature throughout all egg chambers and was carried out by means of the forced draft of air as propelled by the blower past the heater and distributed in the long chamber marked "O" to the incubating chambers marked "E" containing stacks of egg trays. In these stacks the air, which entered at the top, was driven by the forced draft vertically down through the egg trays and was returned by an open space beneath the trays for the fan or blower, from which the circuit passed the heater or continued on a complete continuous circuit. The accuracy of this drawing representing the machine as described in the publications and illustrated by the photographs, is testified to by Hastings, Lieber and the electrical contractor, Peabody, who installed the fans and electrical controls, and is verified by Hickox's photographs, description and testimony.

Hastings compared the drawings, Exhibits 22-22A (Vol. II, pp. 1111-12) with the Hickox photographs, Exhibit 26C (Vol. II, p. 1126), saying:

> "The photograph showing the fan shows the chamber which, in the drawing, is marked 'G,' and it also shows on (fol. 746) the floor a moisture pan, which in the drawing is marked 'L.' The fan shown in the photograph is the one which I have described which was first installed. The drawing shows, in the same chamber (G) a blower which was used to replace the fan which was first installed and which is shown in the photograph.
>
> "Q. What as to the other photograph?
>
> "A. The other photograph is a photograph of the chamber, which in the drawing is marked 'D.' It was taken by a camera which was located in or beyond the doorway at 'C,' and shows the fronts of the incubating compartments with the six of the removable panel doors which in the drawings are

RESPONDENTS' EXHIBIT 26-C

Hickox Photograph: shows a water pan "L" under the fan or blo
er "J" in fan chamber "G": fan is blowing air into passagew
"N" to descend into trays "F": see Exhibits 22-22A.

RESPONDENTS' EXHIBIT 26-D

Hickox Photograph: corridor "D" in front of the stacks of eg
trays "F" drawn out partially from the stacks "E": see Exhibit
22-22A.

marked 'Q' in place and the one removed. At the top of these panels in the photograph are the buttons which are indicated in the drawing and marked 'P.' In the background of the photograph is shown a stovepipe crossing the rear of that chamber, which is the stovepipe or exhaust from the heater which is marked 'U' in the drawing.

"The figures 2 and 3 appearing in the photographs are numbers that are placed on those doors or panels and above the spaces where they go, merely to indicate which door fits in which panel, as they were individually made and some didn't fit in other places quite, due to roughness in carpenter work." (Vol. I, p. 524.)

Lieber said these drawings were "about as near a drawing of the incubator as it was set up as you could get without taking an actual photograph. Of course, the—it may not run true as to size, etc., or inch or quarter inch, or whatever you might call it, or as to scale, but that is approximately like it was set up after the blower was set up." (Vol. I, p. 604.) Peabody identified the drawings and the photographs as correct. (Vol. I, p. 600-1.)

(E) Hastings Publications as to His Prior Use.[1]

A photograph of this motor driven fan in the incubator, and the interior of the incubator, with this description, appeared in "Electrical World," July 6, 1912. (Defendants' Ex. 25; Vol. II, p. 1120.)

"Muskogee, Okla., has a 30,000 egg incubator, the heat control and air circulation for which are effected by electrical means, while the growth of the chicks is artificially forced by tungsten electric

[1] These publications are pleaded as anticipatory as publications in their own right (Vol. I, p. 10) and as corroborative of the Davis and Muskogee prior uses of Hastings.

light. Use of motor-driven blowers to circulate the air heated by natural-gas burners has made possible the compact construction of this hatchery, the egg trays of which are superimposed on racks twenty deep. Five thousand eggs can thus be handled and hatched in a space of 2 ft. by 4 ft. by 4 ft., requiring only about one-tenth of the volume demanded by the old style incubators. After hatching has begun trays with high sides are substituted for the incubating trays, each high-side tray occupying the space of two of the ordinary trays.

"Although the idea of converting the whole building into a hatchery, with superimposed open trays for the eggs, is not new, according to Mr. Norman H. Hickox, contract agent for the Muskogee Gas & Electric Company, the use of a motor-driven blower at Muskogee to force the evenly heated air to all parts of the tray racks has for the first time made this method practicable on a large scale. Humidity of the air is controlled by passing it over open pans of water, as shown in Fig. 2. A home-made thermostat controls the natural-gas supply to the burners through a mercurial valve, keeping the temperature in the incubator constant at 100 deg.".

Hickox stated in his typewritten original article pasted in his scrapbook and written in 1912 with reference to the photographs he had taken:

"* * * The large capacity is attained by superimposing twenty trays, one above the other, so that 5,000 eggs fill a single chamber measuring about 2 by 4 by 4 feet. * * *

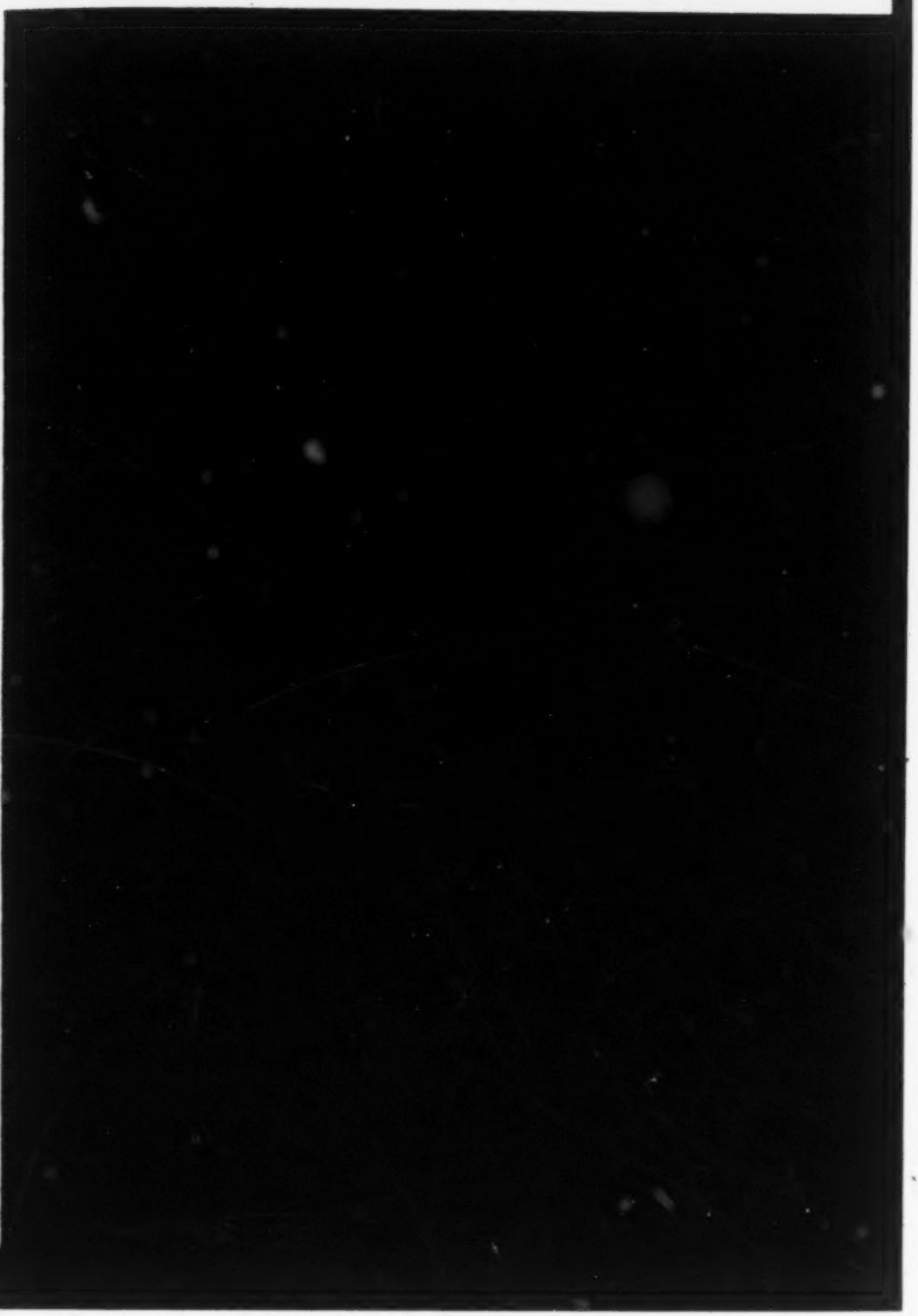
"It is a very simple idea, that of placing the trays one above the other, and like all other simple ideas it has been tried before, but failed to work on account of the fact that it was hard to heat up such a large mass of eggs and maintain the temperature constant at all points. This was overcome, however, by the use of an electrical centrifugal fan,

RESPONDENTS' EXHIBIT 26-F

Hickox Photograph: hatching eggs three stacks from the end showing eggs not hatched at one end only.

RESPONDENTS' EXHIBIT 26-D

Hiskox Photograph: trays of eggs with some eggs unhatched; some eggs hatching and some trays removed: stage incubation in a stack.



RESPONDENTS' EXHIBIT 26-C

Hickox Photograph: handling eggs third stack from the end.

which drives a blast of warm air through the mass of eggs from top of [to] bottom and heats the entire mass of eggs (or cools it) at the will of the operator. The amount of moisture in the air is governed by the moisture introduced at the fan, as is shown in Fig. 2. * * *

"Outside air can be admitted to this compartment whenever necessary. This also shows the pan of water underneath the fan, to keep the moisture in the air at the right amount. This fan is supplied by central station service, and the owner of the incubator keeps a duplicate on hand at all times to immediately put in place should a break-down occur. As a stoppage of ventilation would make it necessary to throw away all the eggs in the incubator and start over again, it will be seen that the dependability of the central station service is the biggest point of the whole process.

"From here we enter the main incubator, in which the temperature is always kept at 100 degrees. * * *" (Vol. II, pp. 1121-2.)

In the Hickox album were the original photographs he had taken in his presence of the motor driven blower "J," the superimposed egg trays "F," which slide in the incubator chambers "E." Hastings is shown in the work chamber "D." (Respondents' Exhibits Nos. 26, 26B-C-F.)

Lieber testified on behalf of the petitioner that as high as 25,000 eggs were in process of incubation at one time in the Hastings' Muskogee incubator. (Vol. II, p. 773-4.) He said they had from 1,500 to 2,000 individual customers. (Vol. II, p. 775.) Numerous witnesses for both parties testified as to the constant visits of people bringing eggs and taking away chicks. (Vol. I, pp. 639-40, 642-3, 657, 659-661; Vol. II, pp. 769, 773, 786, 789.) Hickox so testified. (Vol. I, pp. 593-4.) Peabody said,

"I saw the incubator itself in operation." (Vol. I, p. 600.)

It is apparent that the eggs in this incubator were of different ages; and petitioner does not, we understand, deny it.

Hastings testified that eggs of different ages were being set and hatched.[1] The photographs, such as the Hickox photograph A, Exhibit 26, show chicks that are being hatched where the paper walls around the trays retain the chicks and unhatched eggs appear in other trays. Hastings testified that the eggs were of different ages in the same stack of trays. Lieber testified that they could be put either way, that is, either all eggs of one age in each parallel stack of trays, or of different ages in a single stack of trays. (Vol. I, pp. 517-18, 535-6; Vol. II, p. 782.)

Hastings testified:

> "I did not operate this incubator at Muskogee with eggs of one age in a single compartment, not a full compartment of eggs of an age. As to whether I ever operated it with eggs of one age only in a single compartment, I did, because a single tray in the test hatch would have been that. Whether, disregarding the demonstration hatch that I testified about, we ever operated the incubator at Muskogee with compartments in which the eggs of one age were placed in one compartment only, we never operated with eggs of the same age put in one compartment so as to materially fill the compartment. The practice was to keep eggs of different ages distributed throughout the different compartments, which aids in the equalization of the incubating chamber. I have no memory of testing this

[1] Hastings said in this testimony that the time of setting, i. e., how often, was not material; respondent tries to misconstrue this statement into his saying that stage incubation was not material.

RESPONDENTS' EXHIBIT 26-F

Hickox Photograph: air openings at top of stack of trays.

RESPONDENTS' EXHIBIT 26-B

Hickox Photograph: candling of eggs with control instruments in the foreground.

incubator at Muskogee with a compartment filled with eggs of one age. I do not deny that I did.

"The slides provided in the top of the chambers were installed for the purpose of regulating the flow to the different compartments, but finding that the air flow was sufficiently distributed among the several compartments, the practice was, when operating to anywhere approximating full capacity, to keep all slides full open. The purpose of the slides was that of distributing the air flow." (Vol. I, p. 559.)

Air was driven in a blast from a common source and distributed downwardly through each stack of trays and then returned to a common stream of air whence it was returned to the fan for delivery in a continuous circuit. However, it is immaterial whether the eggs were all of one age in each stack of trays or of different ages. It is immaterial to this issue whether a different temperature was present in one stack of trays as compared with another, because a continuous circuit of the same body of air by which all air from all stacks of trays was mingled and returned to the top of all trays would bring about the transfer of heat from the hotter eggs to the cooler eggs by the transmission of the heat to the common body of air in the continuous circuit. This would bring about uniform temperature and equalize it.

This Court has said in interpreting this patent that the exact order of arrangement of the eggs or the direction of the air with reference to the age and heat of the eggs was immaterial, saying:

"* * * The specifications and claim both contemplate a continuous circulation of the current of heated air through the chamber, which, regardless of its direction, would continuously operate, by repeated contacts with the eggs in all stages, to equalize the temperature throughout the chamber by

carrying heat units from the warmer to the cooler eggs. * * *

"* * * Such continuous circulation of the air at constant temperature, lower than that of the more advanced eggs and higher than that of the less advanced, tends to produce the equalization of the temperature of the eggs by flow of heat units from the warmer eggs to the cooler, regardless of the direction of the current in the circuit, and regardless of the particular stage of the eggs which it reaches first." *Smith v. Snow,* 294 U. S. 1, 12, 13.

We believe this description adequately describes the Hastings Muskogee incubator and its operation, whether the eggs in the stack of trays in each column are of the same or different ages. Hastings' common air stream was subdivided as it passed downwardly through the separate stacks, was reconsolidated at the bottom for re-delivery by the fan again into the tops of the stacks of trays, effecting that very objective by a continuous circulation of a blast of air that Smith had in mind, namely, a current of heated air of sufficient velocity to circulate, diffuse and maintain the air throughout the chamber at substantially the same temperature so that the units of heat will be carried from the eggs of the more advanced stage of incubation to those in a less advanced stage. The temperature was 103 degrees inside. (Petitioner's witness Pitts, Vol. II, p. 789.) This continuous circuit of air blown over the moisture pan would conserve the moisture just as in the Smith patent. The opening and closing of the doors allowed fresh air to come in and foul air to escape. (Vol. I, pp. 629, 659, etc.) Smith's patent recognizes a variation of 5° in the temperature and Hastings also found the temperature would tend to vary with the egg ages.

In the Smith patent the vertical partitions separating the stacks of egg trays direct the current of air vertical-

ly through the columns of egg trays and likewise in Hastings the partitions between the stacks of trays guide the vertical movement of the common body of air in separate streams, which common body of air, as in the Smith patent, after passing through the stacks of trays, is reconsolidated and mixed in the fan and then recirculated in a continuous circuit.

The Hastings' Muskogee incubator was not financially successful because an attempt was made to do custom hatching for those who supplied eggs to the hatchery at the impossibly low price of one cent an egg. But the operation of the incubator itself was successful in that it hatched satisfactory percentages of the eggs set in it when the eggs were of normal fertility. Hastings testified:

> "The quality of hatches in the Muskogee 1912 incubator were very highly variable and rated all the way from complete failures of small lots, to back lot winter eggs that were brought in by local poultrymen, to excellent hatches that were secured from eggs of a good hatching quality provided by more skilled poultry men. I best recall the hatching percentages of white leghorn eggs that I purchased throughout that hatching season from a man named Gaunt who resided at Benton, Arkansas. I found from an early trial of these eggs that they were good hatching quality, and, hence, for the purpose of producing chicks for sale, we bought throughout the season an average of two cases a week, and these eggs hatched uniformly well throughout the season, and the hatching percentage never fell, with the Gaunt stock, below 70 per cent of all eggs purchased." (Vol. I, p. 519.)

Lieber testified for respondents:

> "* * * it hatched thousands of eggs into chicks * * *. My recollection is that it ran from

nothing in some cases to as high as 75 and 80 per cent in other cases." (Vol. I, pp. 606, 607.)

Lieber **also testified for petitioner,** who called him:

"* * * The result was that he was swamped with business. He had at the one time that I remember, about 25,000 eggs in the incubator, many of them belonging to individuals who had only one setting of eggs, or about 15, in the hatchery. I judge there must have been something like 1,500 or 2,000 different people who had eggs in the hatchery at that particular time. He was supposed to keep each [fol. 1061] fellows eggs separate. But with the work he was endeavoring to do himself, it was a physical impossibility for him to keep track of the various batches of eggs. The result was that one fellow who brought plymouth rock eggs would get Rhode Island red chicks. And so on, through the whole 1,500 or 2,000 individuals. * * *.

"Q. **Are you positive that you secured at least a 50 per cent hatch?**

"A. **In some cases more than 50 per cent.** Some folks had just as well had door knobs in the hatchery, so far as the chicks they obtained from their eggs. Some of them got none. But I do remember that the incubator hatched what was regarded *as* that year as an average hatch.

"Q. Was there any difference in the hatches at different times during the year?

"The only difference that I remember of was that the first hatch was extremely low, and Milo Hastings attributed it to the ordinary exhaust fan, which was being used to circulate the air. After the blower was substituted for the exhaust fan he got average hatches from the incubator." (Vol. II, pp. 774, 775, 782, 783.)

Hickox testified:

"I probably visited the Hastings' incubator five

or six times. Muskogee was a very active, growing city; people were coming in all the time, establishing their homes, establishing businesses. And so far as the Hastings business was concerned, to my recollection every time I was ever there there was business being done. People were either bringing eggs to be hatched or were taking away baby chicks, as I recollect it, from their own eggs or were purchasing baby chicks that were being sold there as freshly hatched." (Vol. I, pp. 593-4.)

Petitioner's witness, Hogan, testified:

"Q. Did you have any experience or business dealings with the hatchery?

"A. Well, I bought baby chicks from them.

"Q. How many did you buy?

"A. I could not say, it has been so long.

"Q. Do you remember the price you paid?

"A. No, I could not say, I just remember getting the chicks. I was there several times, I could not say just how many, just a few, probably fifty." (Vol. II, p. 786.)

L. W. Pitts, now a retired government clerk, living in Muskogee, Oklahoma, said that during the years 1911, 1912 and 1913 he was connected with the Indian Agency and was engaged on a small scale in the poultry business operating small incubators. He testified that he recalled distinctly the Hastings Muskogee incubator and that it was in operation in Muskogee during the hatching season of 1912 and 1913. He visited this incubator on several occasions, one time being a visit paid by the Poultry Association of Muskogee during the hatching season of 1912, when the Hastings incubator was in operation. (Vol. I, pp. 634-5.)

In Pitts' deposition for petitioner, introduced from the *Stone* case, he testified:

"A. Yes, I remember it so well, because it was zero outside and when we were in there it was 103.

"Q. Do you remember how the air current, or currents, were formed?

"A. I know that he used a fan." (Vol. II, p. 789.)

C. T. Brewer, now a retired United States Post Office employee living in Muskogee, Oklahoma, where he has resided for thirty-two years, testified that Hastings built the Muskogee incubator and that it was operated in Muskogee as a commercial hatchery during approximately the years 1911 or 1912. He had as many as two or three hundred eggs hatched in this incubator himself, and, in addition to the eggs which he had hatched he sold in the neighborhood of one thousand eggs to the company operating the Hastings incubator for commercial hatching. (Vol. I, pp. 638-41.) Brewer said:

> "As to the results of the eggs which we turned over to be hatched ourselves, well, we considered it fair results, good results, satisfactory. * * * from 70 to 75 per cent of the eggs which we turned over to them would be hatched chicks." (Vol. I, p. 640.)

Van D. Campbell and his wife operate now the Marathon Hatchery in Muskogee, Oklahoma; he is familiar with the hatching business, is a carpenter and has installed incubators. He came to Muskogee from Kansas in 1911 when he was 20 years old and recalled the Hastings incubator in Muskogee. He saw the incubator in actual operation and he and his family had eggs hatched in this incubator. "It was a brick floor, I think, and he had some kind of a circulating system, and he had chickens hatching in there, thousands of them; * * * You opened a door and walked right in and there were chickens and trays there of eggs. * * * Was a ter-

rible roar in there. I know it had some kind of fans." His testimony was that "I know that it hatched chickens." (Vol. I, pp. 642-3.)

The following witnesses were *called by the petitioner* to testify in this case, in connection with the Hastings incubator in Muskogee during 1912 and 1913: Cory, Shanafelt, and Ward.

Cory testified that he was in Muskogee at the time Hastings had his incubator and that he was acquainted with him. He saw this incubator in actual operation and that it continued to be operated throughout the whole hatching season of 1912 under Hastings supervision and that it likewise was operated throughout the next season by Hastain. Although he did not obtain any hatches from the eggs which he placed in the incubator, he testified that he thought at the time that some of his eggs were hatched, but that Hastings was operating a chicken farm a little north of Muskogee, and his opinion was that Hastings had taken the chicks that were hatched from his eggs and put them out on his chicken farm. He further testified that the Hastings hatchery was "well patronized by people interested in the poultry industry at that time." He said: "I went on the inside of the hatchery a few times. I saw it then in actual operation. I can't tell from memory how long it continued to operate. I don't know. Well, it is my opinion that it operated throughout the whole hatching season of 1912." He said he saw a fan used for circulating the air. (Vol. I, pp. 646-7.)

Cory was raising chickens at this time himself and selling eggs for hatching purposes to others. He admitted that he had received several complaints from others to whom he had sold eggs as to the eggs not being fertile and not hatching. (Vol. I, p. 645.)

Shanafelt, during 1911, 1912 and 1913, lived in Muskogee, Oklahoma, and was interested in poultry raising at that time. He became a customer of the Hastings hatchery and took approximately 200 eggs to be hatched and obtained very poor results. However, it develops that when Shanafelt took his eggs to be hatched in the Hastings incubator it was being operated with the exhaust fan and not with the blower. He never turned over to the Hastings incubator but one batch of eggs to be hatched and he saw the machine in actual operation and knew that it hatched some chickens, and that the machine was operated throughout the hatching season of 1912. Also that after Hastings left, Hastain continued in the operation of the incubator. (Vol. I, pp. 654-5.) Shanafelt testified that Hastings' method of operating this incubator, in the way he handled eggs, was very unbusinesslike and that some customers would turn over to him eggs of one breed to be hatched, and, on account of the methods of Hastings in the handling of the eggs, would be given chicks of a different breed from the eggs which they had turned over to him. Shanafelt had a small flock of hens himself and was unsuccessful in getting a good hatch of chickens.

> "I know that he did actually hatch chicks in that incubator, regardless of the percentage of the hatch. I am sure, at that time, I got—seems to me it was two or three chickens out of my batch that were white chickens and I was breeding black chickens. I know it hatched some chickens." (Vol. I, p. 654.)

Ward lived in Muskogee, Oklahoma, from 1911 to 1913 and was a salesman for the Binding Stevens Seed Company, selling seeds, poultry feed, incubators and supplies. He recalled the Hastings incubator and was in the place of business of the Hastings Muskogee Hatcher several times. He testified that the first hatches

which Hastings obtained only ran from five to twenty per cent of the fertile eggs, and that Hastings changed or remodeled his incubator and got better hatches.[1] He admitted that the Hastings incubator was operated through two hatching seasons, but was under the impression that those seasons were 1911 and 1912. The only change or remodeling of the Hastings incubator which he knew of was a change[1] in the location of the exhaust fan and he was positive that the Hastings incubator was actually in operation and did hatch eggs throughout the hatching season of two years. (Vol. I, pp. 657-8.)

Petitioner's witness Anderson admitted that the Hastings incubator at Muskogee was in operation for a year or more starting in January or February, 1912, and extending over until 1913. (Vol. II, p. 769.) Hastings had gone in 1913 to build a larger incubator in Texas; Muskogee lacked his skilled supervision and suspended after 1913 because not financially successful. "It hatched all right," said Lieber. (Vol. I, p. 622.)

Taggart, an officer and agent for the plaintiff, testified that in 1926 he undertook to buy from Mr. John G. Lieber the "Sirocco" blower used in the Hastings incubator of 1912, his interest in buying it, "being based upon the assumption that it had been used in the Hastings incubator in 1912 and 1913 at Muskogee" and he was trying to get together duplicates or reconstructions of early methods of incubation. **He admitted having offered fifty dollars for this blower and that Doctor Smith of the Smith Incubator Company knew in 1923 that there had been an incubator started in Muskogee in 1912 and 1913.** (Vol. I, pp. 663-4.)

The witnesses for the petitioner admitted that it was

[1] The change was the substituting of the Sirocco blower for the Emerson exhaust fan.

operated in Muskogee throughout these two hatching seasons. The testimony of Shanafelt, Cory and Ward, as to poor hatches that were obtained, all related to the incubator as originally installed with the exhaust fan as the means of providing the forced draft circulation of the heated air. *There is no testimony from any witness of any mechanical failure of the incubator to operate, in securing successful hatches of eggs, after the substitution of the Sirocco blower for the fan in the incubator.*

Hickox's photographs and articles corroborate the description given by Hastings in his testimony and corroborate the illustrative drawing showing the complete incubator. Peabody, the electrical contractor, said of the illustrative drawings, Exhibits 22 and 22a: "represents the general scheme that was employed in supplying warm fresh air for this incubator." As to the success of the incubator Peabody testified: "I know that incubator was actually used and placed in operation. * * * I did not hear any criticism either of Mr. Hastings personally or the operation of that incubator." (Vol. I, p. 600-1.)

Hastings next season went to Port O'Connor, Texas, to promote another incubator of larger size, but was unsuccessful in getting the backing of the community. This proposal, based upon his Muskogee work is pictured and described in "Technical World," Def. Ex. No. 12:

> "One of the unique improvements in the Texas plant is a turning system, by which compartments holding 10,000 eggs are swung on a pivot and the eggs turned by inverting the entire compartment. This enables one man to turn 100,000 eggs in less than two minutes. These eggs are ventilated and maintained at an equal temperature by an eight hundred pound centrifugal fan, requiring four horsepower to operate it, and the temperature is

> regulated to a tenth of one degree, while water sprays regulate the moisture to a similar nicety."

This Port O'Connor hatchery was not fully completed —the statements as to it were based partly on what happened at Muskogee and what was expected to happen at Port O'Connor. (Vol. I, pp. 573-4.)

There is no rebuttal by petitioner of the existence and operation of the Hastings incubator at Muskogee. There is no rebuttal of the fact that there was stage incubation and a continuous forced draft of a body of air passing over eggs of different stages repeatedly so as to transfer the heat from the hotter eggs to the cooler. The only complaint is as to the commercial success in a financial way and whether all of the hatches of the eggs were of commercial quantity. The witnesses called by the petitioner devoted themselves to saying that the hatches at most secured by Hastings were not more than 50 per cent and that commercial hatches should be as high as 70 or 80 per cent. This is rebutted by their own witness Lieber, who later testified that the average was 50 per cent and that some of the hatches ran from 70 to 80 per cent. Hastings and others testified as to the success of the hatching. (Vol. I, pp. 520, 607, 640; Vol. II, pp. 773, 783.)

It would seem to be immaterial as a matter of anticipation whether this percentage was an average of 50 per cent or the maximum of 70 to 80 per cent for a highly successful commercial hatchery. We do not know of any early installations of an invention that achieved full commercial success in their initial stages. This Court so found in the Telephone Cases, as well as many others. "The law does not require that the discoverer or inventor, in order to get a patent for a process, must have succeeded in bringing his art to the

highest degree of perfection." *Telephone Cases*, 126 U. S. 1, 536.

Complaint is made that the air speed mentioned in the Hastings file wrapper was only about 30 feet a minute and that this was insufficient to constitute an anticipation of Smith. The Smith patent does not specify any particular air speed. It generally specifies that it must be sufficient to carry the heat from a hot egg to a cool egg to accomplish the result. The proof shows that the Hastings machines did have blowers for that purpose and that the air was so carried and the results were successful hatches—nothing more is required.

In this case the petitioner claims that the respondents' machine is an infringement. The respondents' machine has air speeds many places in its trays of eggs 30 feet *and less* according to petitioner's own tests in its own exhibits. (Petitioner's Ex. 24.)[1] Therefore, if the Hastings speed of 30 feet a minute is insufficient, it is quite obvious that petitioner's charges of infringement should likewise fail.

Thus, this Muskogee incubator was actually built, installed and operated for two years—that is, the two hatching seasons for the years 1912 and 1913. Its construction and operation and the results were testified to by Hastings, Hickox, Peabody, Lieber, Pitts, Brewer and Van D. Campbell. Petitioner's witnesses testified to the same effect: Cory, Shanafelt and Ward.

The objections the petitioner makes to this testimony are these:

That the construction of this incubator is uncertain, resting on oral testimony without the benefit of contemporaneous memorandum; that Hastings in this in-

[1] See a summary in this brief of these tests at pages 64-5.

cubator was proceeding along an entirely different way from Smith and finally that Hastings' efforts resulted in financial failure, his incubator only operating through two seasons.

In answer to these propositions we direct the Court's attention to the contemporaneous corroborating documents, consisting of photographs taken of the incubator itself at the time of its operation in 1912 and articles describing it published at the same time, such as Defendants' Exhibits 22B to 22F inclusive, Vol. II, pp. 1113-14, Defendant's Exhibits 23, 24, 25, 26A to 26G inclusive, Vol. II, pp. 1115-1130, supporting the oral testimony of the witnesses and the Hastings' filewrapper.

As to petitioner's claim that Hastings' Muskogee incubator operated along different lines from the Smith alleged invention, there is no doubt on this record but that Hastings used staged incubation along with forced draft circulation. Lieber testified that Hastings had his egg compartments so arranged that he could keep all eggs of one age in one stack and eggs of another age in another stack or eggs of different ages in the same stack, and that the temperatures in the stack could be kept different and the eggs moved from one stack to another. But even this witness said: "I don't say he did that in every case, but it was equipped so he could do that." Vol. I, p. 627. Hastings stated positively this was not done, and that eggs of different ages were placed in the same compartment and allowed to stay there until the hatching occurred, only moving the eggs when ready to hatch to the bottom tray space just as Smith calls for in his patent.

The photographs taken by Hickox show eggs in process of incubation and some of them hatching, indicating that they were in all stages. The movement of the air in a continuous stream through the several stacks of

egg trays and thence back to the fan in a common stream where it mixes will bring about the heat transfer where the eggs in one stack are all of one age or of different ages. The object of uniform temperature is secured by blowing a common body of air over eggs of different ages, no matter what their arrangement as to age, whether in parallel or over one another. This is in harmony with the interpretation of this patent by this Court.

As a matter of law, even it were a fact that this prior use was financially or commercially unsuccessful it does not militate against it as a prior use, nor does the fact that the apparatus was crude and the electric fans not as perfect as they are today depreciate its value as a prior use.

As Mr. Chief Justice Taft, in *Corona v. Dovan,* 276 U. S. 358, 384 said:

> "It is a mistake to assume that reduction to use must necessarily be a commercial use" (p. 384.)[1]

As said in *Brush v. Condit,* 132 U. S. 39 (1889):

> "The case is that of the public, well known, practical use in ordinary work, with as much success as was reasonable to expect at that stage in the development of the mechanism belonging to electric arc lighting, of the exact invention which was subsequently made by the patentee; and, although only one clamp and one lamp were ever made, which were used together two and one-half months only, and the invention was then taken from the lamp and was not afterwards used with carbon pencils, it was an anticipation of the patented device, under the established rules upon the subject." (P. 48.)

Thus even if the petitioner is right that the Muskogee

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[1] To the same effect are: Smith v. Sprague, 123 U. S. 249, 266; Telephone Cases, 126 U. S. 1, 536.

use was not successful as a financial venture, yet it is still a good prior use.

On the proposition that the testimony of Hastings and the corroborating witnesses contained mistakes and differences in non-essentials, we believe it is the experience of the courts and the bar that such a condition is a good reason for accepting the testimony of responsible witnesses because it shows their truthfulness. It is only the untruthful who are meticulously accurate in immaterial details as found in *Corrington v. Westinghouse,* 178 F. 711 (2 C. C. A.):

> "It is true that prior use must be established beyond a reasonable doubt, but testimony must be weighed in a patent cause as in other causes and the court *is not permitted to reject arbitrarily the testimony of respectable witnesses because of mistake and differences in non-essentials."* (P. 717.)

There has been no misrepresentation by Hastings and his witnesses. There has been no rebuttal; indeed, the petitioner's witnesses corroborated this prior use. This prior use is splendidly proved by impartial men of high standing, supported by contemporaneous public statements and published photographs.

Can it be true that Smith was not aware of these developments of Hastings—that were so widely advertised prior to his efforts in the field? Smith was not called to rebut this presumption.

Taggart testified that Smith "knew in 1923 there had been an incubator started down there." (Vol. I: 664.)

Petitioner would now have this Court believe that the Sirocco blower was not used by Hastings at Muskogee, because his testimony did not give the exact dimensions of this blower within a few inches, after the lapse of 22 years. Hastings said the opening was eight inches,

and Taggart testified it was eleven-and-one-half inches. Smith's action in sending Taggart in 1926 to buy this junk blower for $50.00—many times its value—is the best evidence that it was used by Hastings and that its existence was embarrassing. The reasons advanced why Taggart would not meet Lieber's terms so as to purchase this blower were given by Taggart that he wanted $5,000 for it and also wanted as a stipulation to the purchase an agreement that it should not be destroyed. (Vol. I, pp. 663-4.) *Keystone Driller Co. v. General Excavator Co.*, 290 U. S. 240.

Additional Hastings Publications.

In addition to the description quoted above from "Electrical World," of July 6, 1912, descriptions and photographs appear in both the trade and general magazines of Hastings' novel development. In the poultry trade magazine, "Poultry Culture," of February, 1912, Ralph H. Searle, Associate Editor, said:

> "This enormous capacity is attained by *superimposing twenty incubating trays one above the other so that* 5,000 *eggs are in a single chamber which measures about* 2 *by* 4 *by* 4 *feet.*
>
> "During hatching, trays with higher sides are placed on alternating tray slides, thus requiring two compartments for hatching the twenty trays incubated in one. With a total of seven compartments the hatchery has a working capacity of ten thousand eggs per week—on a floor space the size of a small bedroom.* * *
>
> "But why has not so simple an idea as the placing of *trays of eggs one above the other* not been tried before? The answer is, that it has been tried, but failed to work for the three following reasons:
>
> "First, the heated air rose, causing a stratification or vertical difference in temperature of about two degrees per foot.

"Second, such a mass of eggs is very slow in heating up.

"Third, most serious of all, once the animal heat develops, a large body of eggs could not be kept cool in the center and overheated just as would a pile of fermenting manure.

"These objections Mr. Hastings has overcome by enclosing an incubating chamber on four sides and driv[i]ng through it from top to bottom a blast of air delivered from a centrifugal fan. The rapidly moving air completely overcomes the temperature stratification of the air due to gravity and at the same time rapidly heats (or cools) the entire mass of eggs. As a result of this simple but effective application of a principle long known to other industries, but never before applied to incubation, the three difficulties above mentioned are overcome.

"The method of turning is that of rolling by hand when trays are reversed and shifted vertically. The inventor, who is a great questioner of all accepted things, was at one time skeptical of the necessity of turning, but experimentation in the Brooklyn plant established results that have elsewhere been found to the effect that turning, not less than three times a day will pay for itself in increased hatching.

* * *

"If 103 is correct for the top of the egg in the top-heat incubator, *the air in the forced draft machine must be carried at* 101 *degrees to secure similar results.* This temperature will be used in the Hastings Hatchery, until there is opportunity for fuller investigation.

"Although the difference is less marked than in the dead air machine it is to be expected that varying degrees of air temperature will be required in heating (or cooling) eggs in varying quantities and different stages of incubation. To accommodate this need, the inventor has ingeniously arranged that the air be divided, after it leaves the fan,

into two flumes. One of these passes the heater and the other does not. Into the ceiling of each compartment slide dampers open from either flume, so that by opening the two in proper relative proportions any temperature desired may be attained in any compartment.

"While this provision for varying the air temperature *at different* stages of incubation is requisite to careful work, it is not as necessary with the forced draft hatchery as with dead air incubators, *because the moving air adds to or removes heat from the eggs with great rapidity.* Because of this fact, *eggs at all stages can be placed in the same trays of the Hastings Hatchery with little or no injury. Mr. Hastings hatched several thousand eggs under such conditions in his Brooklyn plant last year.* This point, while upsetting a tradition, is of no practical significance because eggs of different ages should be kept apart as a matter of general convenience.* * * *

"* * * In daily practice the hatchery runs along quite automatically, continually adjusting itself to the changing demands upon its heating apparatus. Cold weather has no perceptable effect upon the temperature: *The first hatch was made during the recent blizzard.*

"Although temperature and humidity controls were convincing to the inventor, *the Muskogee public waited dubiously for Mr. Hastings' first hatch and it was not until* 164 *lively youngsters broke forth from* 192 *fertile eggs,* (250 *placed in machine*) *that local faith in the big incubator became general. Our last report finds* 158 *of these chicks a week old and without an ailing one in the flock, five weak or defective members having been killed during the first three days and one since drowned in a water pail.** * *

"The Hastings Hatchery offers the first real opportunity for full control of the various factors of incubation which make possible a complete study of the principles involved. Not the least of its practical advantages for experimental work is the fact that *the hatchery*

is Mr. Hastings, who is testing the [illegible] for fertility.

The anteroom contains a com[illegible] ment, shown in Fig. 3, in which is p[illegible] the ventilating fan, the life of the [illegible] bator. Outside air can be admitted [illegible] this compartment whenever neces[illegible] This also shows the pan of water un[illegible] neath the fan, to keep the moisture [illegible] the air at the right amount. This fa[illegible] supplied by central station service of t[illegible] Muskogee Gas and Electric Compa[illegible] and the owner of the incubator keep[illegible] duplicate on hand at all times to ins[illegible] diately put in place should a breakdo[illegible] occur. As a stoppage of ventila[illegible] would make it necessary to throw a[illegible] all the eggs in the incubator and st[illegible] over again, it will be seen that the [illegible] possibility of the central station ser[illegible] is the largest point of the whole pro[illegible]

From here we enter the main [illegible] room, in which the temperature is [illegible] at the right amount—[illegible] The attendant will be see[illegible] [illegible] trays of [illegible] down three [illegible]

tographs of publication in the Hickox album: the photographs i
ication are the same as the photographs taken under Hickox directi

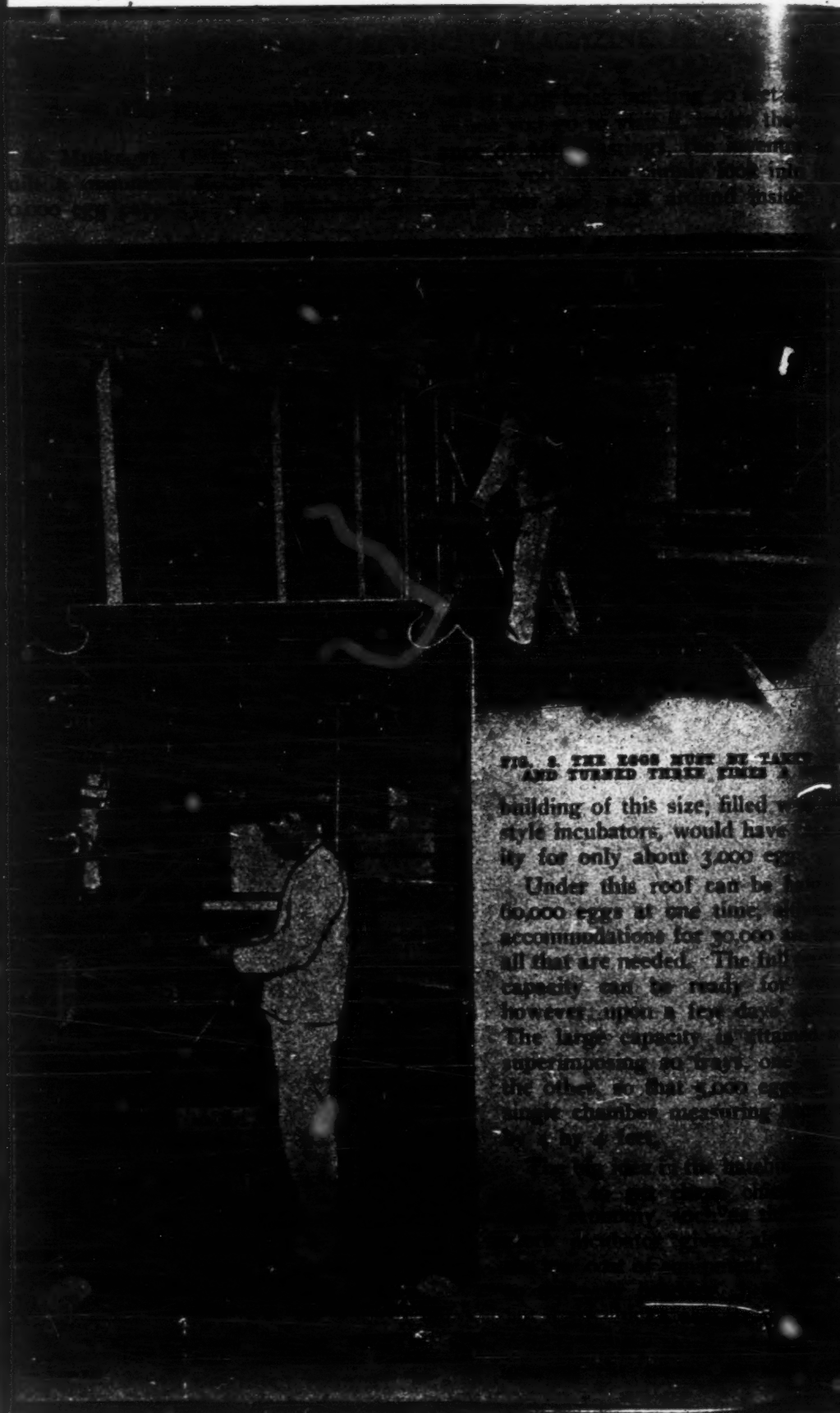

FIG. 2. THE EGGS MUST BE TAKE
AND TURNED THREE TIMES A

building of this size, filled w
style incubators, would have
ity for only about 3,000 eg

Under this roof can be
60,000 eggs at one time, a
accommodations for 30,000
all that are needed. The ful
capacity can be ready for
however, upon a few days'
The large capacity is attain
superimposing 20 trays, on
the other, so that 3,000 eg
single chamber measuring
by 4 feet.

is man-size and can be regulated for temperature and humidity so that the attendant works with the chick or egg without subjecting it to abnormal conditions. Certainly with such equipment, opportunity exists for some first class poultry research work." (Respondents' Exb. 23, Vol. II, p. 1115, etc.)

Later an article appeared in a national publication, "Popular Mechanics Magazine," November, 1912:

"The hatchery is a low brick building about 20 ft. square, and the *large capacity of the incubator is attained by placing 20 trays one above the other, so that 5,000 eggs fill a single chamber about 2 by 4 by 4 ft. in dimensions.* This arrangement of the trays is made possible by the use of an *electrical fan, which drives a blast of warm air through the mass of eggs from top to bottom,* and heats or cools the mass at the will of the operator. A duplicate fan is kept always at hand, for a sudden stop in the movement of warm air among the trays would result in all the eggs having to be thrown away. Reliability of current is, therefore, a big feature of the success." (Respondents' Exb. 24, Vol. II, p. 1117.)

Another national magazine, "Popular Electricity Magazine," published photographs in an article based upon Hickox publicity, which we insert here as photographed from the Hickox album. (Respondents' Exhibit No. 26.)

In April, 1913, George F. Paul wrote in the magazine, "Technical World," an artcle on "Hatching Chickens by Wholesale," which read in part as follows:

"This wonderful economy of space and cost is attained by placing the eggs in superimposed trays like the type cases in a printer's case rack, or the trays in a fruit dryer. This idea has been tried before but was not a success on account of the hot air rising. In the present instance, *this difficulty is overcome by forcing a continual current of air from a centrifugal fan*

through the hatching chamber, which serves to keep it at an even temperature throughout. While this is quite an item of expense and would not pay with a small machine, yet in a big plant it is paid for several times over by the saving of the duplication of the small machines, as well as by the economy of the fuel and labor.

"One of the unique improvements in the Texas plant is a turning system, by which compartments holding 10,000 eggs are swung on a pivot and the eggs turned by inverting the entire compartment. This enables one man to turn 100,000 eggs in less than two minutes. *These eggs are ventilated and maintained at an equal temperature by an eight hundred pound centrifugal fan,* requiring four horsepower to operate it, and *the temperature is regulated to a tenth of one degree, while water sprays regulate the moisture to a similar nicety.*" (Respondents' Exb. 12, Vol. II, p. 1095.)

The Court will observe the emphasis these publications place upon the combination of a forced draft in a continuous circuit for equalizing temperature of eggs in staged incubation of different ages giving off different amounts of heat, which was the basic idea of Smith, as this Court has already found. Without novelty in this idea or in this combination, Smith has nothing left.

(F) Petitioner's Witness Identifies the Muskogee Construction With the Drawing of the Hastings Application.

Petitioner offered in evidence the deposition of Lieber which he took in the Stone case. Lieber explained and identified the Muskogee construction and its operation by reference to Exhibit "A" which was a drawing identical with the drawing from the Hastings application. He supplemented this with Exhibit "B" (Vol. II, p. 793-4) which was an additional drawing prepared by the petitioner and identified by Lieber showing the Muskogee construction. These drawings are practically the same as those pro-

Exhibit "A" to
deposition of
John G. Leiber

A. Egg Chamber
B. Fan
C. Heating Pipe
D. Gas Burner
E. Perforated Partition or Fabric
Arrows indicate air movements

PETITIONER'S EXHIBIT

Exhibit "B" to deposition of Wm. J. Lesser

A. Egg chamber
B. Fan chamber
C. Heating chamber
D. Heating pipes or coils
E. Motor
F. Blower fan
G. Egg trays in position
H. Upper air conduit
I. Upper lateral conduit
J. Lower air conduit
K. Lower lateral conduit
L. Air passageway from B to C
M. Work space in front of incubator

PETITIONER'S EXHIBIT

15

duced by respondents here through Hastings and Lieber. (Defendants' Exhibits 22-A and 22-B.)

We reproduce these Exhibits A and B. Lieber's testimony explains the construction and operation fully in accord with respondents' witnesses. (Vol. II, Lieber pp. 778-81.) When this testimony is read, this Court will see why we say that petitioner is in no position to deny by this witness or any other that the construction and operation of the Muskogee incubator was as respondents claimed it to have been.

Point II

Infringement

The respondents' machine does not infringe for two reasons:

(a) Respondents' method is different: It does not "hatch," i. e., it does not have eggs in it from the eighteenth to the twenty-first day and, therefore, does not move air from the hottest eggs to the cooler eggs.

(b) Respondents' construction is different: It stirs its air with flat bladed stirrers at both the top and bottom of the egg cabinet, and does not drive air in a defined path as the air body is broken up by the stirrers.

Please compare this continuous circuit patent of the petitioner with air currents moving in well defined paths *over eggs of all ages in the same cabinet where they hatch,* with the illustration of the respondents' machine[1] having *eggs only from the first to the eighteenth day, with agitated air and no hatching.*

---

[1] See illustration opposite p. 60 of this brief.

Respondents' machine was the independent development of the James Manufacturing Company, under the direction of A. B. Dann, a Professor of Poultry in Cornell University. It spent $35,000.00 in its development and has received its own patents on its method. (Markey Patent No. 1,939,908, Etc.; Vol. II, pp. 1146-1175.) Consequently, there is a strong presumption of non-infringement. *Corning v. Burden,* 15 How. 252; *Kokomo v. Kitselman,* 189 U. S. 8.

(A) Respondents' Separate Hatching Method Does Not Infringe.

Respondents' incubator has air stirrers to agitate the air. The eggs do not hatch in it as they are removed on the seventeenth or eighteenth day. This removal eliminates 180 per cent of the heat given off by the eggs in the first seventeen or eighteen days.[1]

The accompanying diagrammatic drawing shows the respondents' incubator and the sectional machine which is used as the hatcher. The hatcher is not claimed to be an infringement, singly or in combination with the incubator.

This separate hatcher has no mechanical means for stirring the air. The eggs are ventilated, moisture is supplied, heat is controlled, and nature is left to take its course in the hatching of the eggs.

No hatching of eggs takes place in the incubator where the eggs only remain for the first eighteen days. In the Smith patent the eggs are never removed from the first to the twenty-first day from the cabinet where they hatch. They are subjected to the same temperature and moisture conditions in the Smith machine, whether the eggs are hatching or incubating. They are subjected to the same disease conditions. All of the egg heat of the last three days must be accomodated.

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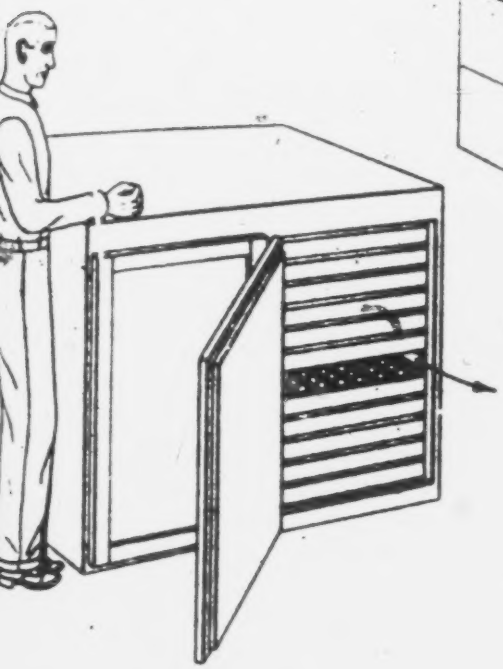
1 Petitioner's Exhibit 3, Vol. I, p. 676.

JAMES METHOD & OPERATION

SEPARATE INCUBATION
AIR STIRRING
EGGS 1ST - 17TH-18TH DAYS

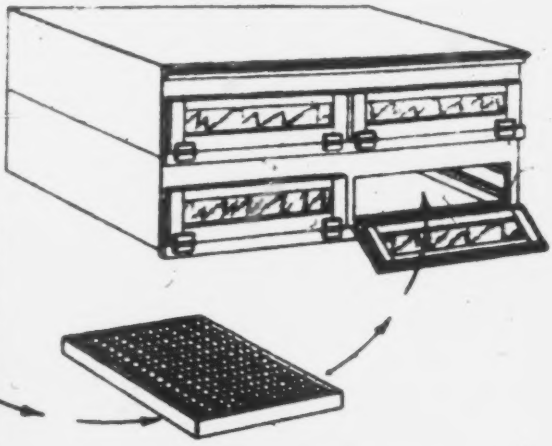
STEP I



INCUBATOR

SEPARATE HATCHING: MORE ADVANCED
17TH-18TH - 21ST DAYS
NO AIR STIRRING

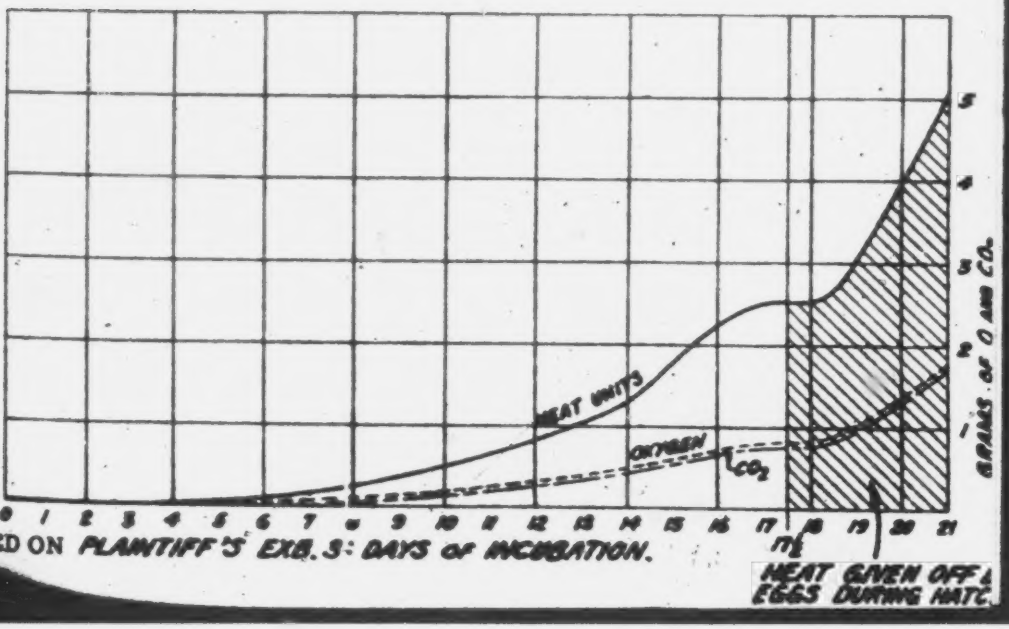
STEP III



TRAY TRANSFER IN OPEN AIR OF EGGS ON 17TH-18TH DAY

STEP II

HATCHER



In the James method, during the first eighteen days, the heat is maintained at 100½ degrees with humidity from 82 to 85 degrees During hatching, the temperature in the separate hatcher is raised to 103 degrees with an unlimited amount of moisture and no air movement of any sort. Smith, to the contrary, when hatching is going on, must keep his temperature down to 99 degrees because of the incubating eggs, even though the hatching eggs need more heat, and he must raise his moisure from 85 to 90 degrees, which is not suitable to the rest of the eggs which are not hatching. There are two schools of thought as to the best method of incubation and hatching according to the physiological conditions demanding different temperatures and moistures. The James Company follows one school under its Markey patent:[1] Smith follows the other school under his patent.

The physiological difference arises from the fact, as shown by Petitioner's Exhibit No. 3, that the heat given off by the eggs during the last three days while they are hatching is 180 per cent of the heat given off during the first seventeen or eighteen days. Physiologically by the seventeenth or eighteenth day the embryonic chick has developed from the germ to the completed animal, so that after the eighteenth day, a period of high mortality, the egg must be subjected to high moisture and a high temperature and should not be subjected to air movements to dry out the egg and the chick that is geting ready to pip. (Vol. I: 212-3, 233-4, 255-6, 308.)

In the James method the eggs giving off the greatest heat (from the eighteenth to the twenty-first day) are not in the incubator. There is no necessity for moving the air in well defined currents to remove the heat from

[1] Markey Patent No. 1,939,208. (Vol. II, p. 1166.)

the hotter eggs to the cooler eggs. A gentle agitation or stirring of the air is sufficient. There is no need to conserve moisture in the James incubator because the hotter eggs, during the last three days, are not present, which make the greater demand for moisture. This is shown by the fact that Smith has to raise his moisture content in the incubator to from 85 to 90 degrees when his eggs begin to hatch. (Vol. I, 148-9, 332-3.)

The second advantage of separate hatching is the reduction of disease. Bacillary white diarrhea is spread by the chicks taking in the bacteria through the pulmonary tract. The disease is spread, according to the Government bulletins, in proportion to the air movements.[1] Hence, machines like Smith must resort to extensive fumigation because the hatching takes place in a cabinet where the air is being driven in defined currents at high velocity.[2] In the James separate hatcher there is nothing to agitate the air and spread the infected down. **James, therefore, has produced a new method having a different sequence of steps.** James' effort has been not a quantity production in mammoth machines, such as Smith, but a limited production in individual units where not more than 5,000 eggs at a time are being incubated and where only a fraction of that amount is being hatched at any one time in the separate hatcher. (Vol. I, 301.)

However, Smith claims that, despite the fact his patent is limited to a method of hatching, James uses his invention for a part of the time, and, while James does not have eggs in the hottest or last stages of incubation in his incubator, yet he is an infringer, because some of the eggs in James are hotter than others. The

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[1] Vol. II. Exbs. 66 and 67, pp. 1225-1229.
[2] Vol. II, pp. 1225-29, and Vol. I, pp. 298-9; Respondents' Exhibits Nos. 66 and 67.

S. B. SMITH

INCUBATOR

Application Filed October 26, 1916

1,262,860 Patented April 16, 1918

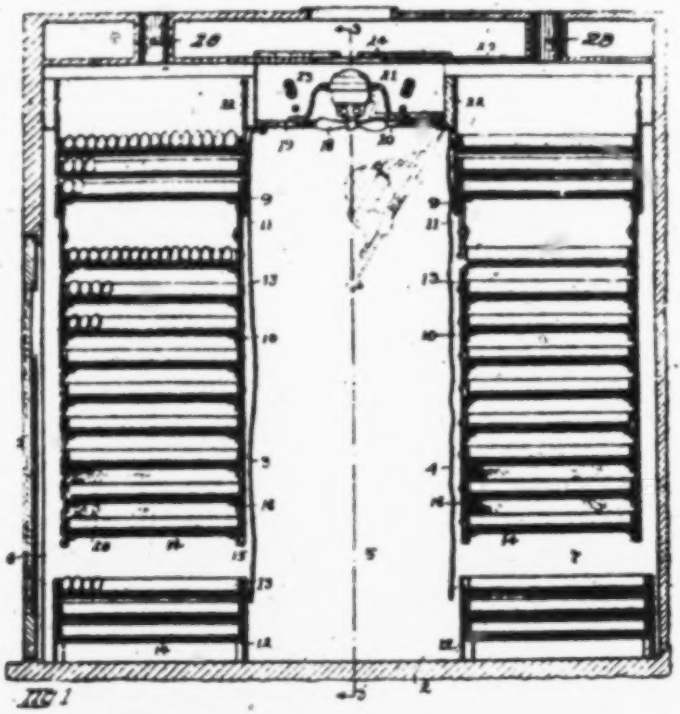
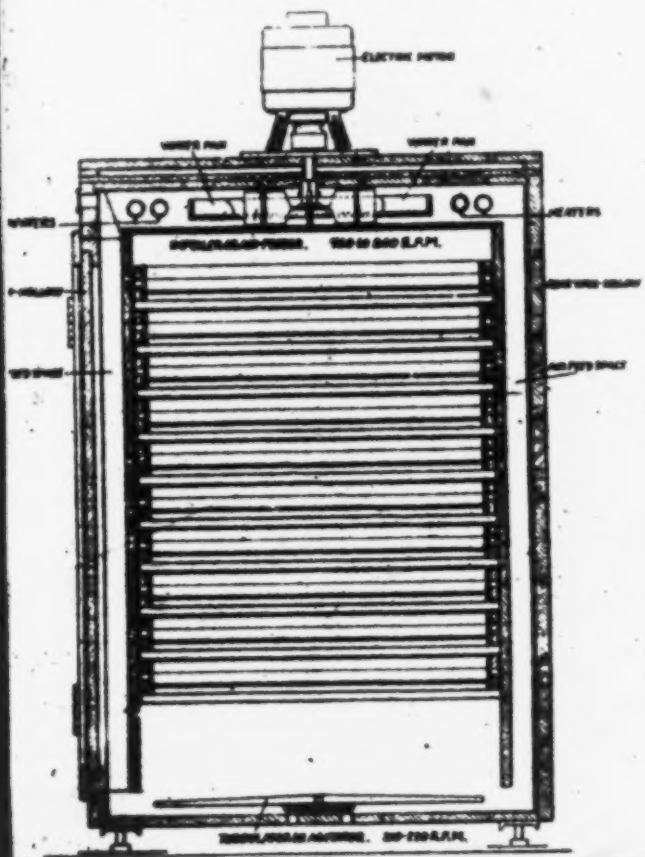
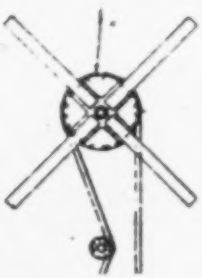


FIG 1

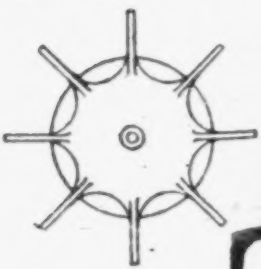
VERTICAL CROSS-SECTION OF DEFENBAUGH'S INCUBATOR.



Air Mixer
or
Agitator
210-220 R. P. M.



Impeller
or
Air Feeder
550 to 860 R. P. M.



fallacy of this position is shown by the authorities submitted with our analysis of the claims to the effect that to constitute infringement all of the different steps of a process must be followed in producing the same result. The record shows that different steps and a different apparatus using another method producing another result are employed by respondents.

(B) Respondents' Construction Does Not Infringe.

The present respondents have a machine in which the air is agitated. This stirring or agitation of the air is effected at the top and bottom of the machine by flat-bladed stirrers or air mixers.[1]

The incubator of the respondents consists of a small square box without any corridors. A man cannot go inside the machine because there is no corridor for him to stand in, and the machine is not big enough for a man to get into. It is not a mammoth incubator. It only holds 5,000 eggs. This small box contains a number of trays in two stacks closely adjacent to one another. The rear of the stack is spaced from the rear wall of the cabinet a couple of inches. The front of the stack is spaced from the front door several inches. At the top of the cabinet is an aluminum flat-bladed stirrer, longitudinally disposed, that churns the air and throws it out peripherally in *all directions*, churned and rotated in a whirling body, over the heating pipes and the water pan. As this churned air is displaced outwardly by the pressure of the flat blades it travels down the front and back of the egg trays where it is engaged at the bottom by another flat-bladed turbulator or agitator traveling at from 210 to 220 r.p.m. (the speed of the Petersime and Blum flat stirrers)[2]

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[1] Vol. I, pp. 204-7.

[2] Buckeye v. Petersime, 19 F. (2) 721-2 (Sixth C. C. A.)
Buckeye v. Blum, 17 F. (2) 459 (Sixth C. C. A.)

where any surrents of air are broken up and agitated so that there can be no defined air currents in this machine. This is necessary because the cold fresh air is taken in through the openings in the bottom of the cabinet and mixed with the warm air by this agitator at this point.

There is nothing above this agitator to cause the air to return to defined currents. The air passes in this turbulent agitated state without defined currents as it moves upwardly through the eggs in the trays due to the light suction of the upper stirrer displacing its air horizontally. This air speed is irregular and the air is agitated and turbulent in the eggs, as shown by the petitioner's own tests of respondents' incubator (Ex. 24). **Having broken up any air currents by the agitator, the air is in a state of general commotion and turbulence without defined paths as it is stirred amongst the eggs in the trays.** The air goes up at one speed in one place and down in another place at another speed. There is no "movement of the air in current form following substantially defined paths." James had no need to do this as it is not confronted with the problem of handling the high heat of the last three days of the eggs, i. e., the hatching eggs.

Petitioner proved by its Exhibit No. 24 (Vol. I, p. 686) that respondents' air is turbulent It showed the direction of the air, both up or down, and the speed of the air, both up or down, in each tray of the defendants' incubator. Their test showed this:

> Bottom Tray 1: Air speeds measured in vertical direction only vary from 205 feet a minute going down to 420 feet going up within a few inches of each other. All air speeds irregular.
>
> Tray 2: Air speed varies from 20 feet per min-

ute down to 380 feet a minute up; all air speeds in different places irregular and different.

Tray 3: Air speeds vary throughout the entire tray from 15 feet to 330 feet a few inches apart.

Tray 4: Air speeds vary completely throughout the tray ranging from 60 to 260 feet per minute a few inches apart.

Tray 5: All air speeds different throughout the tray ranging from 70 to 190 feet per minute a few inches apart.

Tray 6: All air speeds vary from 70 to 170 feet per minute a few inches apart.

Tray 7: All air speeds vary from 80 to 170 feet per minute a few inches apart.

Tray 8: All air speeds vary from 80 to 190 feet per minute a few inches apart.

Tray 9: All air speeds vary from 85 to 240 feet per minute a few inches apart.

Tray 10: Air speeds vary from 30 to 505 feet per minute a few inches apart.

Certainly, air cannot be traveling generally in one direction in a continuous, defined current where there is such tremendous variation in speeds and direction.

This air movement was found in respondents' machine by the Patent Office when it issued respondents' own patent to Markey, No. 1,939,908, which describes this operation thus:

Object to Churn Air.

"It is my object to provide means for churning the air and, at the same time, causing a vacuum in the top of a stack of egg trays, delivering the churned air over humidifying means for controlling its humidity and reducing its temperature, re-

storing its temperature, introducing fresh air into the churned air, evacuating a portion of the air that has once passed over the eggs, and returning the remainder of the air thus humidified, heated and churned to where it can be again churned, mixed and diffused, preferably in combination with incoming air, and then allowed to rise gently between diffusing supports of numerous eggs by convection and also due to the creating of a vacuum at the top of the eggs due to the churning of the air in a separated space above the eggs, thereby avoiding drafts, hot and cold spots and forced circulation of air which would move the air so rapidly that it would be unable to suitably treat the eggs."

This Markey patent was allowed over the Smith patent and in the light of it, and because it was distinguished from it, for these reasons. There is thus a strong legal presumption of non-infringement.[1]

The best test on non-infringement hinges on the question of whether or not as a matter of fact the stirrers at the top and bottom do churn the air and agitate it and do not drive it in a continuous defined path. In the first place, flat-bladed stirrers churn air: to drive air in a defined path away from the stirrers axially requires the tilting of the blades, as in the case of a household fan, such as Smith uses.

The respondents have proved by the overwhelming weight of the evidence that the respondents' air is stirred and churned in the incubation chamber and is given a bodily movement in a state of gentle commotion and utter irregularity.[2] Dr. Greene, Dean of Engi-

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[1] New Jersey v. Buffalo, 131 F. 265, affirmed 135 F. 1021 (2nd C. C. A.); Abbott v. Standard, 290 F. 418, affirmed 296 F. 126 (2nd C. C A.); Auto v. Amphion, 186 F. 159 (2nd C. C. A.); Simplex v. Leonard, 180 F. 763, affirmed 200 F. 581 (2nd C. C. A.); Knowles v. West, 43 F. (2d) 929 (2nd C. C. A.); Boyd v. Janesville, 158 U. S. 260; Corning v. Burden, 15 How. 252; Kokomo v. Kitselman, 189 U. S. 8.

[2] Vol. I: Greene, 203-8; 214-218; 264; 268-70; 401-4; Shodron, 346-8; Richards, 332-4; Zaffke, 344-5; Exhibit 73.

neering, at Princeton University, who tested this machine exhaustively, so testified. (Vol. I, pp. 252-3.)

Practical experience in the field with the James machine shows the difference in result when the bottom stirrer is used and when it is not. This demonstrated the necessity of churning the air with the bottom stirrer. Richards, who had charge of the Poultry Division of the northwest branch of the James Company at Minneapolis, testified that when the driving mechanism of the lower stirrer broke, the hatch was reduced from 5 to 10 per cent. The difference of 5 per cent would mean the difference between financial success and failure for the hatchery under present conditions. (Vol. I, p. 334.) Zaffke, in charge of the Poultry Division of the Fort Atkinson branch of the James Company, testified that when the lower turbulator or stirrer became inoperative, due to a broken belt, even for a few days, the resulting hatch, in actual cases, ran from 5 to 7 per cent lower, which would represent the difference between profit and loss in a hatching season. Naturally, the greater effect was in the bottom trays adjacent the lower turbulator, and the effect was not so great in the upper trays adjacent the upper turbulator, that did not stop. (Vol. I, p. 345.) Shodron, consulting engineer for the James Company, testified that "the turbulator or air mixer takes the downcoming air and the cold intake air, and thoroughly mixes them and breaks it up into a homogeneous mass." (Vol. I, p. 346.) He testified this was shown by the smoke tests, which showed that when the smoke was introduced into the chamber and "the air mixer motor was then started and immediately upon the action of the air mixer the entire mass of the smoke was thoroughly mixed so that it was a blended mixture entering the lower section of the chamber," which showed the turbulent nature of the air and the breaking up of any air currents when

the air passed up through the eggs. He ran tests when the incubator did not have the lower turbulator operating. He produced his test data and photographs of the apparatus being tested, saying "this series of tests shows that the efficiency is increased in incubation and that the increase of this efficiency is sufficient to make either failure or success of the machine." (Vol. I, p. 348, and Exhibit No. 73, Vol. II, p. 1231.)

The respondents do not conserve moisture: the petitioner must conserve moisture in his machine. In the petitioner's patented machine, due to the excessive heat set up by the eggs in the last three days, which tends to dry out all of the eggs, it is necessary, with a continuously circulating draft of air passing in defined channels, to conserve the moisture. The James machine has open water pans. Water is cheap and it need not be conserved, because the stirring of the air does not drive the moisture out of the machine. James does not have the heat of the hottest eggs for the last three days, which amounts to about 180 per cent of the total heat given off by the eggs during the first eighteen days.[1]

Even the petitioner admits that the bottom stirrer puts the air into commotion without any currents in a defined direction. Obviously, if the air at the bottom of the machine is in a state of general commotion and agitation and is slowly drifting upwardly, it must remain in such a condition as it moves up through the eggs as there is no additional fan to restore it to a defined current. This was proven by the smoke tests in respondents' machine. (Ex. 73; Dr. Greene, Vol. I, pp. 203-8, 214-8, 264, 268-79, 401-4; Shodron, Vol. I, pp. 346-8; Richard, Vol. I, pp. 334; Zaffke, Vol. I, pp. 344-5.)

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[1] See Petitioner's Exhibit 3, Egg Heat Chart, Vol. I, p. 676.

This Court's Definition of the Smith Patent.

This Court said in *Waxham v. Smith, et al.*, 294 U. S. 20:

> "But the function which a machine performs, here, the *hatching* of eggs, is to be distinguished from the means by which that performance is secured." (P. 21.)

And, in *Smith v. Snow, et al.*, supra, it said:

> "It was possible to carry on the process of incubation continuously by placing fresh eggs in the incubator at intervals, *as those of the most advanced stage hatched* and the new-born chicks were removed." (P. 6.)

The essence of the Smith invention lies in the retention of the eggs of the last three days in his cabinet so that the heat of these hottest eggs can be used to heat the cooler eggs from the first to the eighteenth days by the continuous current of air in a defined path forced over the eggs from group to group. This Court mentioned this, in the *Smith v. Snow* case, saying:

> "* * * The specifications and claim both contemplate a continuous circulation of the current of heated air through the chamber, which, regardless of its direction, would continuously operate, *by repeated contacts with the eggs in all stages*, to equalize the temperature throughout the chamber by carrying heat units from the warmer to the cooler eggs." (P. 12.)

Much has been said by petitioner as to the use of the comparative "warmer" to "cooler" eggs in the claims meaning that the claims apply to a machine which does not have eggs in the last three days. But on page 15 of his brief petitioner now confines his patent to one applying to eggs of all stages in a single room. This Court

said that Smith's "current of heated air * * * would continuously operate, by repeated contacts with the eggs *in all stages*, to equalize the temperature throughout the chamber by carrying heat units from the warmer to the cooler eggs."

In the incubator of the respondents it cannot be contended that the current of heated air contacts with eggs "in all stages." Respondents' eggs in the last stage of three days are in a separate hatcher totally without contact with the eggs in the incubator.

The second boundary of the Smith patent is that dealing with the air movements and was announced in disposing of the defense of Snow and Waxham that defendants in those cases had air agitation of Petersime and Blum type and not air currents in defined paths:

> "Assuming without deciding, that it calls for a current of air so constant in its movement and direction as not to depart substantially from a well defined path, one would expect that a fan operating, as in respondents' machine, within a closed chamber under substantially constant conditions, *would produce currents of air without substantial variations of path.*" (P. 19.)

This Court said that the patent covered the Waxham machine, because, "The evidence supports the finding of the Special Master and of the two Courts below that the currents of air set in motion by the fans *flow continuously along defined paths.*"

And, likewise, the Court said:

> "It is enough that there is a movement of *air in current form following substantially defined paths through the tiers of egg trays,* sufficient to effect the desired transfer of heat units." (P. 20.)

When the defendants in the *Snow* and *Waxham* cases attempted to prove that their machines had agitation of air, that is, air moving not in defined paths, *this Court found that those machines did not have agitation,* but did have air flow in currents along defined paths and, therefore, were infringing machines. In this manner, the Court affirmed the Ninth Circuit which distinguished its decision on the Waxham machine from the air agitation or stirrer machines of Petersime and Blum in the Sixth Circuit,[1] by holding that Waxham and Snow had air currents in defined paths and did not have agitation as in the Petersime and Blum machines.

The Claims Are Not Infringed.

Taking Claim 1 as the typical method claim, the respondents do not infringe because:

First, they do not have a method of "hatching."

Second, they do not utilize the heat of the hottest eggs during the last three days which give off 180 per cent of the heat given off by the eggs in the first eighteen days, in the practice of the method.

Third, they do not conserve moisture and do not need to conserve moisture in the sense used in this patent.

Fourth, they do not move the air in a defined current from one place to another as defined by the Supreme Court in connection with Claim 1, but agitate

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[1] We quote the Court's description of the Petersime and Blum machines in the Sixth Circuit: "Defendants' device was operated under my observation at this hearing. Undoubtedly the air within the incubator chamber is in commotion. It is not at rest in any part of the chamber. • • • **It may be accurately described as a stirring and churning operation. It agitates the air, but does not drive or force it in any uniform or ascertainable direction."** Judge Westenhaver in Buckeye v. Blum, 17 F. (2) 459. "The Petersime device is an open box without partitions, in which there are egg trays of different sizes arranged in a drum. • • • There are inlets for air at the bottom and outlets at the top. The air in the drum is agitated by a slow moving stirrer, but there is no defined current created by the agitation. • • •" Buckeye v. Petersime, 19 F. (2) 721, 722 (C. C. A. 6).

it and churn it, as in the Petersime and Blum machines. The same things are true of method Claims 2 and 3.

As to the mechanical Claim 5, it specifies a corridor which defendants do not have. It specifies a power-driven fan, *meaning an instrumentality that moves the air in a defined circuit,* while the defendants use agitators or stirrers for putting the air in general commotion without a defined current.

Therefore, respondents both lack the steps of the method of the petitioner, and also the mechanism for practicing those steps. We found our case squarely upon the doctrine of *Royer v. Coupe,* 146 U. S. 524, 531, in which Mr. Justice Blatchford said:

> "* * * it must be shown that the defendants used all the different steps of that process, or there could be no infringement; that the defendants did not use the sweating process, which was the first step in the plaintiff's treatment, and therefore did not infringe." (P. 530.)

As this Court said in *Westinghouse v. Boyden,* 170 U. S. 537, 569:

> "But, after all, even if the patent for a machine be a pioneer, the alleged infringer must have done something more than reach the same result. * * * As was said in *Burr v. Duryee,* 1 Wall. 531, 573 * * * 'That two machines produce the same effect will not justify the assertion that they are substantially the same, or that the devices used are, therefore, mere equivalents for those of the other.' Not only is this sound as a general principle of law, but it is peculiarly appropriate to this case." (P. 569.)

Even if we grant to Smith the most generous latitude to his claims, still there is no infringement by these respondents.

Point III

Answers to Petitioner's Objections to the Hastings Defenses and Petitioner's Claims of Infringement

(A) Objections Answered as to "The Dollar Hen."

Petitioner objects to "The Dollar Hen" because Hastings' ideas were inspired by the practices in cold storage rooms, but this Court has already held that it was invention by Smith to apply to incubation the teachings and principles of other arts, such as those of heating and ventilation, of which refrigeration is a part.[1] Besides, the origin of the statements in an anticipating publication can scarcely be of importance because the important issue is the nature of the disclosure itself, irrespective of its origin.

The principal objection now made to "The Dollar Hen" in petitioner's brief (page 20) is that it lacks "The ordered and intelligent utilization of the endothermic and exothermic properties of a large mass of eggs, *set with some regard for their progression in incubation,* was wholly a closed book to Hastings." But here again we observe that this patent has already been interpreted by this Court as not limited to the specific position or "progression" of the eggs of different ages nor the movement of them, as taught in the Smith patent, from one place to another and therefore the Smith patent is not limited to the arrangement of eggs "set with some regard for their progression in incubation."

Petitioner heretofore in the *Snow* and *Waxham* cases vigorously proclaimed that his patent was not to be so limited despite the teaching of egg movement in his patent; and now he complains that "The Dollar Hen" is

[1] Smith has to resort to refrigeration principles by using cold water in his heating pipes to control the excess heat at hatching time. (Vol. I, pp. 156-7.)

not anticipatory because it does not recite in detail this factor of eggs being set "with some regard for their progression in incubation" which he formerly said was not important.

Furthermore, "The Dollar Hen" does make even this specific disclosure, teaching the movement of the eggs into another position in the single room at hatching time when Hastings said:

> "At hatching time the eggs are spread out in trays in a special hatching room, which is only large enough to accommodate chicks to the amount of one-sixth of the incubator capacity, for twice a week deliverings, or one-third if weekly deliverings are desired."

Can petitioner then truly say that Hastings did not teach in "The Dollar Hen" evenness of temperature in a room occupied by eggs of different ages, secured by a steady current of air maintained, as he said, "sufficiently brisk, however, to prevent an unevenness of temperature in different parts of the room"? Even petitioner's further limitation of his patent to setting with some regard for progression in incubation is disclosed by "The Dollar Hen."

(B) Objections Answered as to the Davis-Brooklyn Incubator.

Let us test the assertion that the principles of the Smith invention were not embodied in the Brooklyn incubator. The basis for petitioner's assertion is that in the Davis incubator there were fabric panels at the top and botom of the stacks of egg trays through which the air had to be driven by the fan from top to bottom in a continuous circuit over and over again, that these fabric sheets so reduced the air flow that there was not sufficient air circulation, and that the incubator was in effect a still air machine, quoting incomplete, fragmen-

tary portions of the record to support his theory. Such is not the fact and the record so shows, but petitioner failed to quote that part of the record. (See the complete testimony on this subject, Vol. I, pp. 550-553.)

The quotation in petitioner's brief (page 25) left out the preceding sentence, which said: "I did that early in the season; at the beginning of the operations." (Vol. I, pp. 550-551.)

Hastings then explained that the fabric panels did not affect the hatching, but he early found them unnecessary as checking the air flow and serving no useful purpose, so he removed them. He said, referring to Exhibit 21: "The drawing does not show the fabric panels which I used at the Davis hatchery because that was a trial effort or idea in the first construction of the machine and was dropped from the usage, and the drawings show the machine as used after it had been tried out and found that the fabric panels were not necessary." (Vol. I, page 552.)

The fact that he used the fabric to distrbiute air equally in the egg chamber indicates that he understood the necessity for equal distribution of air by the fan, and the fact that he removed it shows he understood the principle so well that when he found he could reduce the resistance to air flow and improve his principle of air velocity and at the same time have equal distribution of air, he removed the fabric diffusers. This seems to us to be the logical and sensible course of a man who understood the principles of the forced circulation of air by a fan in a continuous circuit over the eggs of different ages.

In his Muskogee prior use he used large openings in top of his tray stacks (see Photo, Exhibit 26-F) and controlled the balancing of air for each tray stack by slides. His fan was at one end of the hatchery and neces-

sarily the opening in the stack tops meant the fans would get more air than those further away unless he used the slides to cause a balance of air distribution—again proving his understanding of *the principle* of equal distribution of air draft in a circuit over eggs of different ages.

Petitioner criticizes the disclosure in the Hastings patent application which shows in the dotted lines perforated panels or fabric sheets for diffusing the air on the ground that this would so impede the flow of air from the fan that the chamber A would be practically a still air chamber.

The fallacy of this argument is that the arrows in the drawings of the Hastings application show the air actually passing through the chamber A as the air is driven by the fan through the perforated members E to evenly distribute the air, and what is more important in this drawing, *the air can never get back into the eye of the fan and be recirculated unless it passes through the chamber at fan velocity.* There would be no other purpose for the fan. Fan B would have to build up sufficient pressure with corresponding velocity for this purpose if it were to have a continuous circuit of air as described by Hastings in his application. Any mechanic could select a fan strong enough to follow this disclosure.

Petitioner now regrets the position he heretofore took in this Court that it made no difference under his patent where the eggs of different ages were placed in the air circuit and he is *now* trying to retract that position in order to avoid the Hastings-Davis prior use on the slim ground that the Davis eggs were of different ages in the *same tray* and that the Smith patent is limited to eggs of the same age in a single tray. We find no such statement in this patent. (Pp. 28, 29, petitioner's brief.)

Hastings knew that it made no difference whether you had eggs of different ages in each tray in the stack

or whether you kept the eggs of different ages apart in separate trays. That is only a matter of "general convenience" in keeping track of when the eggs are going to hatch. As Hastings said in his article of February, 1912, in "Poultry Culture":[1]

> "While this provision for varying the air temperature at different stages of incubation is requisite to careful work, it is not as necessary with the forced draft hatchery as with dead air incubators, because the moving air adds to or removes heat from the eggs with great rapidity. Because of this fact, eggs at all stages can be placed in the same trays of the Hastings Hatchery with little or no injury. Mr. Hastings hatched several thousand eggs under such conditions in his Brooklyn plant last year. This point, while upsetting a tradition, is of no practical significance because eggs of different ages should be kept apart as a matter of general convenience." (Page 14, "Poultry Culture" of February, 1912. Vol. II, p. 1116.)

Petitioner claims that even if Hastings did have stage incubation, he did not realize its benefits or advantages. That he did so is amply shown by the publications and patent application quoted in this brief, but even if he did not, it is not incumbent on an inventor to realize the advantages or reasons for what he does or even correctly state them. *Diamond v. Consolidated*, 220 U. S. 428, 436.

The answer to the charge that the Davis use was not a public one is this: friends of Davis and of Hastings were shown the incubator. (Vol. I, p. 534.) A disclosure to a single person is sufficient to make the idea public. It matters not whether they were personal friends

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[1] We direct the Court's attention to the fact that petitioner in his brief on page 29 only quoted one sentence from this paragraph, **while the complete paragraph** read with the sentence shows its real meaning and the fallacy of the attempted argument on this one, isolated sentence. Vol. II, p. 1116.

or impersonal visitors. *Corona v. Dovan*, 276 U. S. 358, 382.

Chicks were produced commercially from the Davis machine and turned over to Hastings' employer Davis for use on his poultry farm. It was operated for trade and profit. This makes a public use out of the commercial operations of the machine. Hastings said:

> "I operated it personally through the active season until Mr. Davis had as many chicks as he could handle."
>
> *Smith v. Sprague*, 123 U. S. 249, 256.
> *Root v. Third Ave.*, 146 U S. 210, 225-6.
> *International v. Gaylord*, 140 U. S. 55, 62-3.

The truth of the matter is that the Hastings-Davis prior use admittedly had a fan driving air in a circuit through a column of egg trays and in the trays were eggs of different ages, which were put there as they could be secured from those who had the eggs to sell—and two thousand eggs were so handled—an amount in one room beyond anything anyone had ever handled at one time in a single machine with a fan. (Vol. I, p. 547.)

Some claim is made (petitioner's brief, p. 33) that the Davis prior use handling a maximum of 2,000 eggs could not be an anticipation because it did not handle larger masses, such as 52,000 eggs, but we cannot take seriously such an assertion in view of the fact that everywhere through this brief of petitioner such heavy emphasis is put upon principles and that the Smith patent is not limited as to any number of eggs handled at one time so long as its principles are used. Indeed, the James incubator only handles 5,000 eggs at a time and petitioner says this is an infringing incubator.

Petitioner even goes further and says that it is an infringing incubator even though the eggs in respond-

ents' machine are not kept during the full period in the machine and therefore the eggs of respondents are not kept in "one room" which petitioner now says is essential to his patent's validity. **Throughout petitioner's brief it is obvious there are different limitations and interpretations of the Smith patent when it is to be compared with the prior uses and publications; and when it is to be treated on the infringement questions.**

(C) The Muskogee Incubator an Anticipation on the Basis Assumed as to Its Construction and Operation by Petitioner.

In considering the statements of petitioner as to Muskogee prior use, this Court will now see the reason petitioner has elected in this case to insert a new limitation in his patent that "the eggs in staged incubation must be set in one room," which was a limitation specifically disclaimed in the *Snow* and *Waxham* cases when the petitioner was asking this Court to disregard the fact that his patent showed its column of egg trays in two separate rooms, formed by the partitions 3 and 4, and to hold that these rooms formed by partitions were immaterial and that the open box in one room was an infringement of his patent. His position is now contrary to the drawings of the Smith patent. The Smith patent has a room divided by partitions in which the eggs are located and communication is had between the two compartments by a communicating air stream passing from top to bottom. This Court has held that it makes no difference how the eggs are arranged in those compartments, or the relative age of the eggs in one place as compared with another in the room or whether there is one room without partitions, as in the Snow and Waxham machines, or two compartments behind the partitions as in the Smith machine. So long as the principle of the defined circuit of air moves over the eggs of all ages in all the rooms and that body of air is mixed by

a fan and is common to all the eggs in all the rooms; that is Smith's claim.

Not to so hold, would be to exclude the machine shown and described in the Smith patent and that is what petitioner would have you now do in order to avoid the Muskogee prior use as limited by it. Our further answer is that even if Muskogee were so limited and assuming for argument that everything petitioner says is correct as to Muskogee operation, (which we do not admit), then the Muskogee prior use is precisely the same as the principles of construction shown in the drawings of the Smith patent, as interpreted and defined by this Court and has the same operation. Therefore, there is complete anticipation.

Now what is this interpretation of the Muskogee incubator that petitioner would have this Court adopt to avoid the Smith patent when limited to eggs in staged incubation set in one room? Petitioner says that the Muskogee prior use consisted of a series of adjacent chambers, seven in all, each intended to receive about 5,000 eggs. Each chamber was closed, he says, except for openings at the top and bottom, the top openings being controlled by a sliding damper. Air was supplied through a flue or passageway to these inlet openings and removed from these inlet openings by the suction of the same fan to which it was returned and used over and over. Petitioner says that eggs of the same age were in each compartment and the differences in ages were only in that the eggs in one compartment differed from another and adds that the eggs, as they increased in age, were moved progressively from one compartment to another. He says that the temperature adjacent the eggs in each compartment differed from that in the adjacent compartment, but has to admit that this temperature was controlled by being transmitted to the

air passing through each compartment which air, taking up that heat, entered the common air stream which was redistributed from the fan into the column of eggs of lesser heat in a continuous circuit.

Respondents claim that even if all this were true, which the witnesses denied as being the practice followed except experimentally, then there is still complete anticipation, giving to the Smith patent its interpretation accorded it by this Court upon which respondents rely. The Smith patent shows separate compartments in which there are stacks of eggs through which split air streams were circulated from a common fan, which air streams came back to the common fan for re-circulation, as in Hastings, and this air traveled through a central corridor or passageway and top flues. The physical and operation analogy is therefore identical between Smith and Hastings. Smith said his preferred form was to arrange the eggs in each column in groups according to age and heat. Petitioner claims that Hastings arranged his eggs in groups according to age, but like Smith being subjected to the tempering influence of a common air stream split into independent streams for each compartment before returning to the fan as a common stream. Smith taught the movement of his groups of eggs from place to place according to age. Petitioner claims Hastings moved his eggs in groups from place to place according to age.

The only distinction that is left is that Smith used varying egg ages in a single compartment and petitioner claims that Hastings used eggs of one age in a single compartment but the eggs of different ages allocated to different compartments. This is a difference in convenience because the principle of Hastings and Smith remain the same, namely, the air was moved in a single room from a common fan through a common inlet pass-

ageway or flue to the several compartments and removed by the same fan through passageways for redelivery so that the heat picked up by this common air stream from the hotter eggs and mixed with the air stream from the cooler eggs would be redistributed to the eggs of all ages for temperature control. In the *Smith* and *Waxham* cases, this Court said that Smith was not limited to the compartment idea or the arrangement of his eggs any place or in any order, but his invention covered the eggs located anywhere in any order of arrangement and any relationship so long as in the box there was air moving on the impulse of a fan in a defined body of air passing over eggs of all ages at all stages of incubation in such a manner that the heat of the later eggs would be picked up by the air and transmitted to the cooler eggs to control the temperature of all the eggs in the incubator.

We submit that the sum and substance of petitioner's argument against the Muskogee prior use, even assuming for argument that he is correct, on such assumption makes out a complete anticipation of the Smith patent.

The fact that Hastings did not succeed commercially or financially; the fact that after demonstrating that his invention would work at Muskogee, even though not financially successful, he was so confident of the practical success that he desired to start larger incubators elsewhere; or the fact of his subsequent employment and history are factors that have nothing to do with this prior use. It must stand, as it can do so, upon its own record.

We are persuaded that it did so successfully operate, that it was a threat to the Smith monopoly and that Smith was desirous of removing this threat because his own Taggart admitted that Smith both knew as early as 1923 of this prior use. As this litigation progressed in

the Courts he was driven to the dangerous expedient of having Taggart try to buy the blower of the Muskogee prior use, which was then in 1926 a useless piece of machinery, for the substantial sum of $50.00 in order to put it into a "museum." We hear nothing more of this alleged "museum" and there is no proof of any other early apparatus finding a final resting place in this "museum." Why was this blower of Muskogee *of this particular prior use* selected as the honor piece for inclusion in this mythical "museum?"

Petitioner in his brief says (p. 52):

> "At the time of taking Lieber's deposition, a blower fan illustrated in the photographs (Exs. 22 B-F; James R. p. 1113-14) was exhibited at Hastain's farm and was offered in evidence as the blower fan concerning which Lieber and Hastings testified. *This is not the fan.* It is a spurious substitute."

Can we accept the charge that this blower or fan is a "spurious substitute" when it was sufficiently genuine to justify the payment of $50.00 so it could occupy an honored place in Smith's "museum?" The two things do not match: Why should Smith send Taggart clear to Oklahoma to pay $50.00 for a rusting blower in an Oklahoma farm field for his "museum" if it was a spurious substitute?

Taggart testified:

> "* * * I did have some negotiations with Mr. Lieber on this matter, in the spring of—in April, 1926. It was after the Stone case and the Cooley case, and it was also after the Wolfe case. In all of these three cases which I have referred to, this alleged Hastings prior use had been thoroughly gone over by the defendants. I was not present at the Wolfe case, and I only know about that from the record.

"As to my purpose in entering into this negotiation with Mr. Lieber, and what I had in mind—at that time I had been requested to get together duplicates on reconstructions of early methods of incubation for the purpose of studying them, and with that idea in view I wrote to Lieber asking him if the equipment which he told me about he had, if he would sell it, and I offered him $50.00 if he would send me the blower and trays which he had told me were a part of the original Hastings incubator. He replied that the blower or trays had no intrinsic value, but that to him they were worth $5,000.

"I first saw this blower in August, 1926. It was after these negotiations I have been talking about.

* * * * * * * * * * *

"In my negotiations with Mr. Lieber in reference to this blower, in addition to his stating that it was worth $5,000 to me, I think Mr. Lieber made the stipulation that he did not want it destroyed. My negotiations came to nothing, I did not buy the blower. After I saw the attitude that he took in the matter, we did not pay any further attention to it. * * *

"It was April 14, 1926, that I opened these negotiations with Mr. Lieber for that blower. **My interest in buying it was based upon the assumption that it had been used in the Hastings' incubator in 1912 and 1913 at Muskogee.** I had been told by Mr. Lieber that he had this blower, but at that time I had not seen it.

"I first learned of the Hastings incubator being operated in Muskogee, I think in the spring of 1923. I learned of it in conversations with Dr. Smith. That would be my best recollection. I cannot say how I first learned of it; when I became associated with Dr. Smith in the spring of 1923 and we were in incubator work. Dr. Smith knew in 1923 there had been an incubator started down there.

"My reason for not carrying my negotiations any further with Mr. Lieber was not due to the fact that he had requested that the blower be not destroyed; that was not the reason I stopped my negotiations with Mr. Lieber. One thing that I had in mind at that time was that we would get up a museum of incubators, and that was part of our reasons for wanting it. In fact, it was one of the main reasons, but when he put a price on it, such as he did, why then, we immediately lost all interest in it." (Vol. I, pp. 663-665.)

Petitioner says that Hastings' Muskogee prior use could not be an anticipation because the air speed was only about 30 feet a minute, but in respondents' machine the air speed, as proven by the petitioner himself (Exhibit 24), is in many places less than 30 feet a minute. We can hardly see why a machine such as respondents' where at many places in the column of eggs the speed is less than 30 feet a minute, can be an infringement, while in another part of petitioner's brief the Hastings prior use that has 30 feet of air a minute is not an anticipation on the forced draft feature.

Vital Differences Between Smith Prior Use and Hastings Prior Use.

Petitioner says that the Muskogee prior use is no more than the Smith prior use heretofore before this Court. (P. 67.) His position is that in both the Smith prior use and the Hastings Muskogee prior use there were separate compartments with eggs only of a single age in both compartments.

The vital fallacy of this comparison is that **in the Smith prior use there was no communication between the compartments and in the Hastings prior use there was communication between the compartments** which had a common fan, a common air circuit, and the practice of the principle of a common air body moving in cir-

cuit over eggs of all ages transmitting heat one to the other. It is this vital distinction between the Smith prior use and the Hastings Muskogee use that makes out anticipation of Smith. The Muskogee prior use provided for *communication* between the compartments by having *a common air stream* repeatedly circulated by a common fan so there could be heat transfer between eggs of different ages through the medium of the common air stream.

This Court distinctly pointed out the difference between the Smith prior use and the Smith patent when it said:

"At the time indicated he used commercially an incubator arranged in three *completely separated* compartments *in each of which* there was circulation of the air by *a fan*. But there was no staged incubation in any single compartment." (*Smith v. Snow*, 294 U. S. 1, 16.)

In the Hastings prior use, the compartments are not "completely separated" and in the Hastings prior use there is not a fan in each compartment. To the contrary, in the Hastings prior use there is **one room** as in the Smith patent; the series of stacks of egg trays are separated by vertical partitions as in the Smith patent; there is a **common fan,** as in the Smith patent, blowing **a common body of air,** as in the Smith patent, which air is divided into independent streams passing through each stack of eggs and is then reconsolidated into the main stream and mixed by the common fan, as in the Smith patent. This makes Hastings an anticipation. These are vital differences from the Smith prior use.

(D) Petitioner's Inconsistency on the Infringement Issue and Prior Uses.

The logical basis of comparison on infringement is to start with petitioner's new and much more limited interpretation of its patent in this case (p. 15, brief) than in the *Snow* and *Waxham* cases.[1]

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[1] Pp. 3-4 of Smith's brief before this Court in the Snow case.

The respondents have one cabinet in which eggs remain for the first 17 or 18 days during incubation. They have another *entirely separate* cabinet that contains the eggs during the last three days. They are exothermic only and give off 180 per cent of the heat given off by the eggs during the first eighteen days. The two cabinets have no connection with one another. The physiological and pathological reasons for this separation on the 17th-18th day have been set forth above (p. 62). The progress of the art has taught the desirability of this new method.

Petitioner now says that its patent is not broad enough to cover "hit and miss setting of eggs of varying ages," but "the eggs must be set in staged incubation which is defined as the successive setting of eggs within the cabinet at brief intervals. In order to secure the benefits of the invention, intelligent use must be made of staged incubation so as to secure an approximate **balance** between the endothermic and exothermic eggs." (Petitioner's brief, p. 14.)

Now what is this "balance" as taught by the patent in suit which is the sole legitimate source of our information? It is the use of the eggs of *all* ages and the use of *all* the eggs so that **the "balance" of the first ten days of cold eggs is struck with the remainder of warm eggs from the 10th to the 21st day.** Nature has divided time of the cold and hot periods into approximately equal parts and it was the pitting of one part against the other that Smith so carefully described in his patent and that Smith and Hastings utilized. (Petitioner's Exb. 3, Vol. I, p. 676.)

James does not use this "balance" because it removes the latter half of the egg life when it takes away the eggs of the last three days, placing them in a separate compartment: the "balance" is gone. The heat during

these three days is 180 per cent of the heat given off during the first eighteen days.

Now where does Smith in this case say these eggs in staged incubation, that is, of all the different ages, must be placed in order for the heat interchange to function? He says (page 15) that "the eggs in staged incubation *must be set in one room..*" James does not set all the eggs in staged incubation in one room, but in two rooms; and thereby follows a different school of thought from that of the patent in suit. Can we imagine petitioner admitting, in view of his position on the Hastings prior uses, that this James separate incubator-hatcher would be an anticipation if it were a prior use? Why petitioner even says the Hastings Muskogee prior use which only puts, as he claims, eggs of the different ages in parallel communicating compartments, with a common air stream, is not an anticipation, yet he would have this Court find that the complete separation of the eggs in separate rooms is an infringement!

And the last proposition of petitioner (brief p. 15) is that "The air must be circulated about *all of the eggs* in this single room.* * *"

The James incubator does not have the air circulated about "all" of the eggs and "all" of the eggs are not in a single room. And petitioner again (page 16) reiterates that the air current must move over "all of the eggs" and it must be the "same body of air" passing over "all of the eggs" which subjects them "to the same temperature," while in the James machine there is a different air and a different temperature, the incubator being held at 100½ degrees and the hatcher at 103 degrees.

It will now be apparent why the Smith method claims and the Smith patent so carefully refer to the "hatching" process because Smith was endeavoring to "balance" the first ten days of cold eggs against the last ten days of warm eggs to get the result on the 21st day of hatching

"so as to secure an approximate balance between the endothermic and exothermic eggs," as claimed by petitioner in *now* defining his patent.

The mode of operation controls the question of infringement in law. *Burr v. Duryee,* 1 Wall. 531, 573. *Cimiotti Unhairing Co. v. American Fur Ref. Co.,* 198 U. S. 399, 414.

Conclusion

The Hastings publications both show lack of inventorship by Smith and anticipate the Smith patent. The Hastings' prior uses corroborated by the Hastings application show an earlier reduction to practice and anticipation of the Smith patent. The new and very much more limited scope sought by petitioner for the Smith patent to avoid the Hastings anticipation is fruitless because even the Hastings publications by themselves or the Hastings prior uses, particularly the Muskogee use, as interpreted and admitted by petitioner to have been operated, anticipate the Smith patent.

We submit that this Court can safely adopt the findings of the Circuit Court of Appeals of the Second Circuit because they are not clearly and manifestly wrong, but to the contrary, they are founded upon widely published documents, contemporary dated records, and the credible testimony of reputable witnesses. These findings are supported by competent evidence. Petitioner's only complaint is that the findings are contrary to the weight of the evidence. This is not sufficient. *Lawson v. United States,* 207 U. S. 1, 12; *United States v. United Shoe,* 247 U. S. 32, 41; *Butte v. Clark,* 249 U. S. 12, 30.

As to infringement, petitioner's new position as to the scope of its patent being limited to a single room with all of the eggs of all stages in that room, *balancing* the heat

one against the other, emphasizes the non-infringement by respondents with their dual cabinets and separated eggs.

Respectfully submitted,

H. A. Toulmin,

H. A. Toulmin, Jr.,

Counsel for Respondents.

udgment Suggest cubator and the ith Organization Your Problems?

Today the uppermost thought in the mind of every thinking hatcheryman is to lessen labor and increase percentage of hatch. Every iota of information leading to the production of more quality chicks at no increase in overhead, gains the eager attention of men and women everywhere in the hatching industry.

This announcement, therefore, comes at a very opportune time. It not only serves to impress the industry with the constant and careful research that is being continually conducted by The Smith Incubator Company, but also goes to show that this company does not hesitate to overthrow time-honored practices when such a course will open the way to more profit for the hatcheryman who uses Smith machines.

• • • •

Every hatcheryman who operates Smith Incubators *never fails to enthusiastically endorse Smith service.* It is admitted that a Smith Incubator is only a means to an end—to make more profit for the man or woman who makes a business of hatching chicks. This chick business is highly specialized—full of problems—subject to constant study and experimentation.

No one realizes these facts more keenly than The Smith Incubator Company, and this realization is borne out once again to the whole hatching industry when our Research Department says: "Hands Off on the Eighteenth Day!"

COMPANY

IO

consider a Smith Incubator merely as so much wood, metal and wiring. We look at it rather as a modern, scientific achievement for the production of the greatest number of saleable chicks at the lowest cost. Such an achievement could not possibly be represented in terms of materials. It must—and is—represented by the findings we have made—the facts we have discovered—which are gladly and freely passed along for the betterment of the hatchery industry.

Free Insurance

All purchasers of incubator equipment—Smith new or used, and used incubators of all other makes sold by us this year—will have their machines insured free of charge for the first year. This policy of The Smith Incubator Co. will represent a saving of many dollars to hatcherymen buying equipment from Smith this year.

After the first year the unpaid portion of the machine will be insured free by this company and if the hatcheryman desires, his paid-up equity can also be insured through The Smith Incubator Co. at a much reduced rate. In fact, it is about half the regular rate.

Owners of incubators, whether new or used, bought previous to this time, will be given the advantage of this same insurance saving as soon as their present insurance expires.

Just Mail this Card

of the death in the shell takes place on the 18th and 19th days. A study of these charts will convince you that at this critical period we should not break up the tray formation or jostle the eggs in any way.

"Yet, on the eighteenth day of your hatching period—the critical time of chick development—common practice has decreed that you should test the trays, throw out eggs, leaving 'holes' in the tray where the infertile eggs came out, and with some types of equipment completely rearrange all the eggs. You have seen this happen many times. The normal circulation of air in an incubator is based on the assumption that eggs fill the trays in close formation. This arrangement permits *a uniform circulation of cooling air around each egg*, and uniform temperature of each egg in the tray." (Vol. II, R. 1138.)

Turn to the Smith circular, Exhibit No. 16 (Vol. II, R. 1098-1101.) We reproduced the last page of this circular (Vol. II, R. 1101) in the beginning of this brief.

Not once in these circulars do we find any claim by Smith that separate hatchers come within the scope of his patent. Any person reading these circulars would undoubtedly be convinced that Smith felt that the separate hatcher was an entirely different and inferior type of machine, and an entirely different method of hatching. **Smith's claim in this lawsuit is directly the contrary to his published statements to the trade, when he had a contrary purpose to serve.**

That this separate hatching is advantageous and different is proven by the experience of respondents with hatches as high as 88% (Vol. I, R. 347), while the percentages secured by Smith according to his witness Taggart have ranged from 50 to 70%. (Vol. I, R. 53.)

POINT VIII.

CONSTRUCTION AND OPERATION OF HASTINGS' MUSKOGEE INCUBATOR PROVEN BY PETITIONER'S OWN WITNESSES AND EXHIBIT.

At the hearing of this case, counsel for petitioner were critical of the proof of the construction of the Hastings Muskogee incubator by reason of the drawings that were identified by Hastings, Lieber, Peabody, etc., as Exhibits 22 and 22-A. Our reply was this, which we repeat.

The conclusive answer and demonstration is that the Hastings Muskogee construction and operation are equally proved from petitioner's own witnesses and Exhibit drawing, showing that construction.* (Vol. II, R. 766-794.) The depositions of the petitioner's witnesses, Cory, Anderson, Shanafelt, Lieber, Hogan and Pitts together with their Exhibits A and B, the latter showing the Hastings Muskogee incubator, were introduced from the *Stone* case, *by petitioner*, where petitioner took these depositions and offered them into this case. We reproduce again Respondent's Exhibit B (Vol. II, R. 794), the Hastings Muskogee incubator. From this drawing, the description that appears on its face, and the testimony of these witnesses (Vol. II, R. 766-794), there is ample proof of the construction and operation of the Hastings Muskogee incubator, as we have described it and as our witnesses have testified. It consists of a single cabinet or room having a corridor M into which you enter through doors. On one side of the corridor M are egg chambers A supplied with air from a blower fan F driven by a motor E in the fan chamber B. The egg trays G are arranged in stacks in the egg chambers A. Air is supplied to these stacks from the fan F, passes downwardly through the stacks and returns to the pas-

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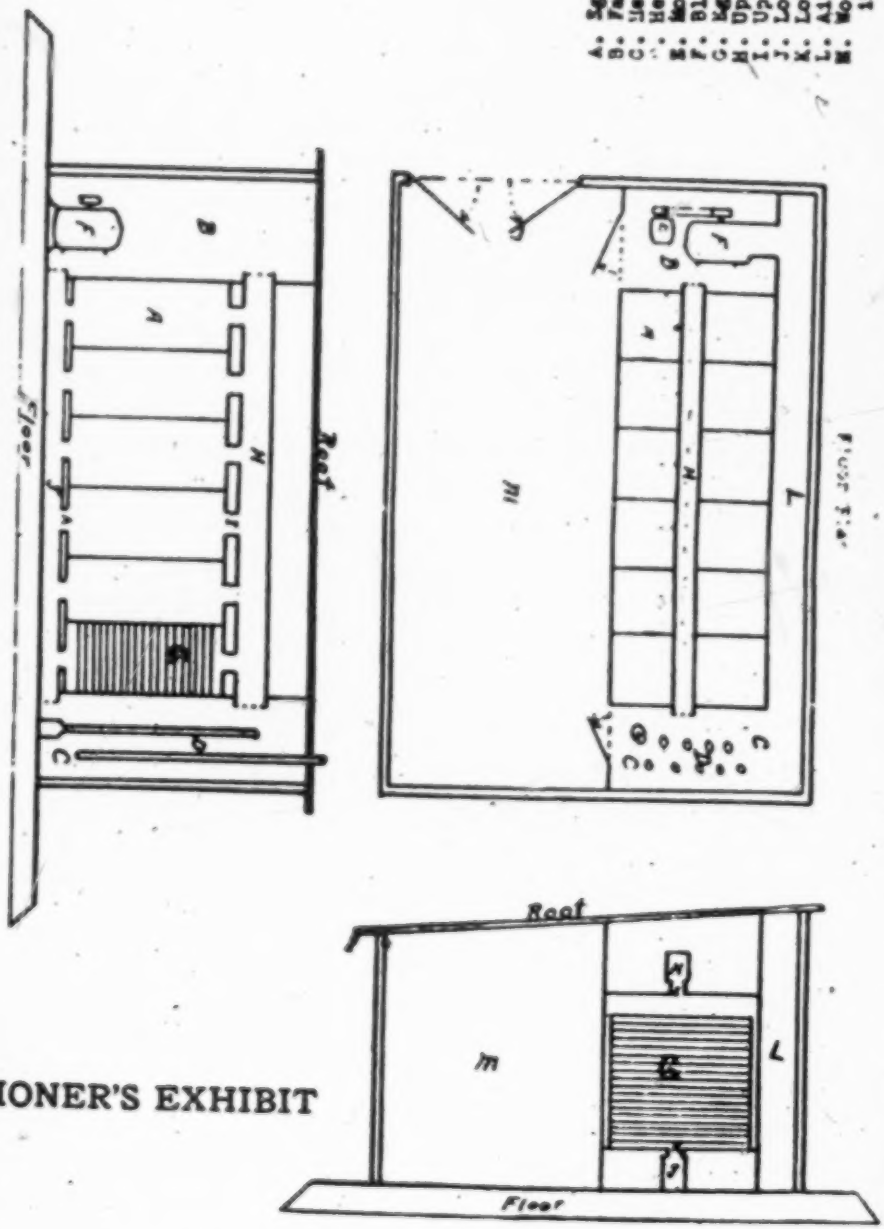
* Offered in evidence after the Hastings, Hickox and Peabody depositions had been taken by the respondents.

Exhibit "B" to deposition of Wm. G. Lester

A. Egg chamber
B. Fan chamber
C. Heating chamber
D. Heating pipes or coils
E. Motor
F. Blower fan
G. Egg trays in position
H. Upper air conduit
I. Upper lateral conduit
J. Lower air conduit
K. Lower lateral conduit
L. Air passageway from B to C
M. Work space in front of incubator



PETITIONER'S EXHIBIT

sageway J to the fan for re-use and re-circulation. The air is circulated through the passageway L over the heating pipes D in the heating chamber C for supplying artificial heat. This case can be founded on the anticipation by the Hastings Muskogee incubator upon the testimony of petitioner's own witnesses and drawings so described by them. *We take it petitioner cannot be permitted to deny or impeach his own witnesses and exhibits.*

In Smith's reply brief (page 3) he asserts that, if the Hastings incubator were actually made and operated as shown in the Hastings illustrated drawings prepared for the trial in the case before Judge Bodine and in this case, Hastings would be "established as the originator of modern mass incubation." Judge Bodine arrived at the same conclusion when he said:

> "In the present day description of this hatchery and the drawings now made, a complete anticipation is indicated."

We propose to demonstrate that these drawings are correct in two ways:

First, by Petitioner's Exhibit B drawing and petitioner's witness Lieber (Vol. II, R. 766-794) which show them to be the same.

Secondly, by the independent new witnesses, Peabody and Hickox, and the latter's photographs and contemporaneous published articles describing the incubator.

The proof of the Hastings construction and operation by petitioner's own witnesses, and Exhibit B from the *Stone* case, introduced in this record by petitioner (Vol. II, R. 766-794), is proof that cannot be challenged by petitioner. The drawings of the Hastings Muskogee machine put in by petitioner as Exhibit B (Vol. II, R. 794) show almost the identical construction in respondent's drawings Exhibits 22 and 22-A, which were identified by

Hastings, Peabody and Lieber. (Vol. I, R. 514, 600, 604, 625.)

Certainly Judge Bodine would have been persuaded that the drawings in the *Cooley* case of the Hastings incubator at Muskogee were correct and proven, if he had known that petitioner had such testimony and such an Exhibit adopted by it. Of course, the testimony in the *Stone* case came later, after Judge Bodine's decision.

The new proof in the James case was also directed precisely to this end. The new witness, Peabody, testified as to the installation of the electrical equipment and the blower and the arrangement thereof, as shown in these drawings. The new witness, Hickox, produced the photographs taken by him in the course of his duties as the agent for the Muskogee Electric Light & Gas Company. These photographs show the interior arrangement to be the same as in the drawings with the incubator in operation, show some eggs incubating and others hatching. One photograph shows the date of March, 1912, on the calendar hanging in the incubator. (Ex. 26D.)

When Peabody was shown this set of drawings Exhibits 22 and 22-A he testified:

> "This represents the general scheme that was employed in supplying warm, fresh air for this incubator. However, this diagram showing the thermostat here is not the one that I saw. The one I saw was more or less of a home-made affair that Mr. Hastings had rigged up himself. This looks like a more finished product than the one he had, but the general circulation of air and the general scheme of warming this air and introducing it through these racks is as was used in that incubator." (Vol. I, R. 600.)

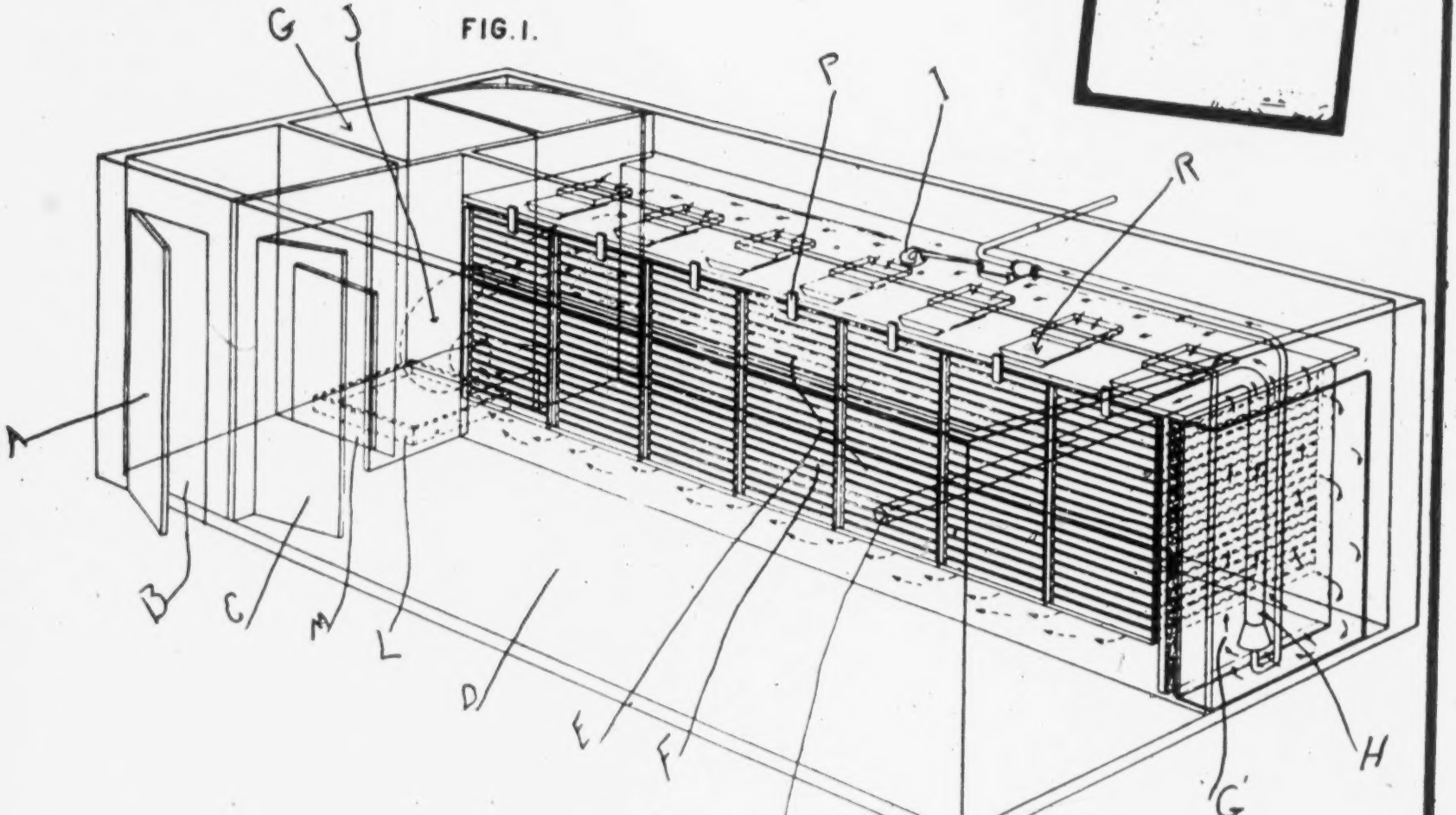
He was then asked to look at the photographs in Defendant's Exhibit No. 26, and he testified:

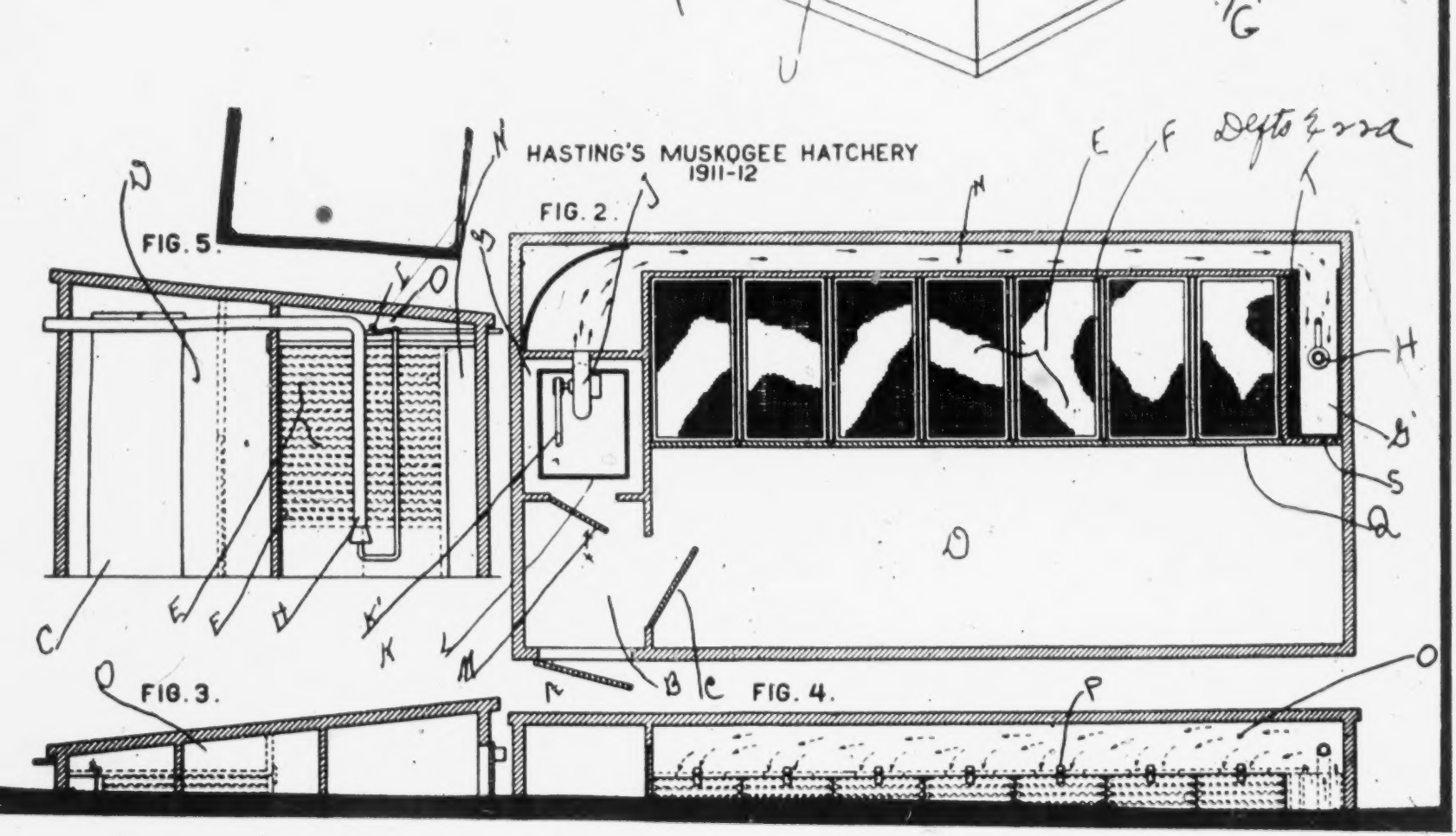
> "This is the installation that I saw there. This is the rather crude-looking switch and thermostat device

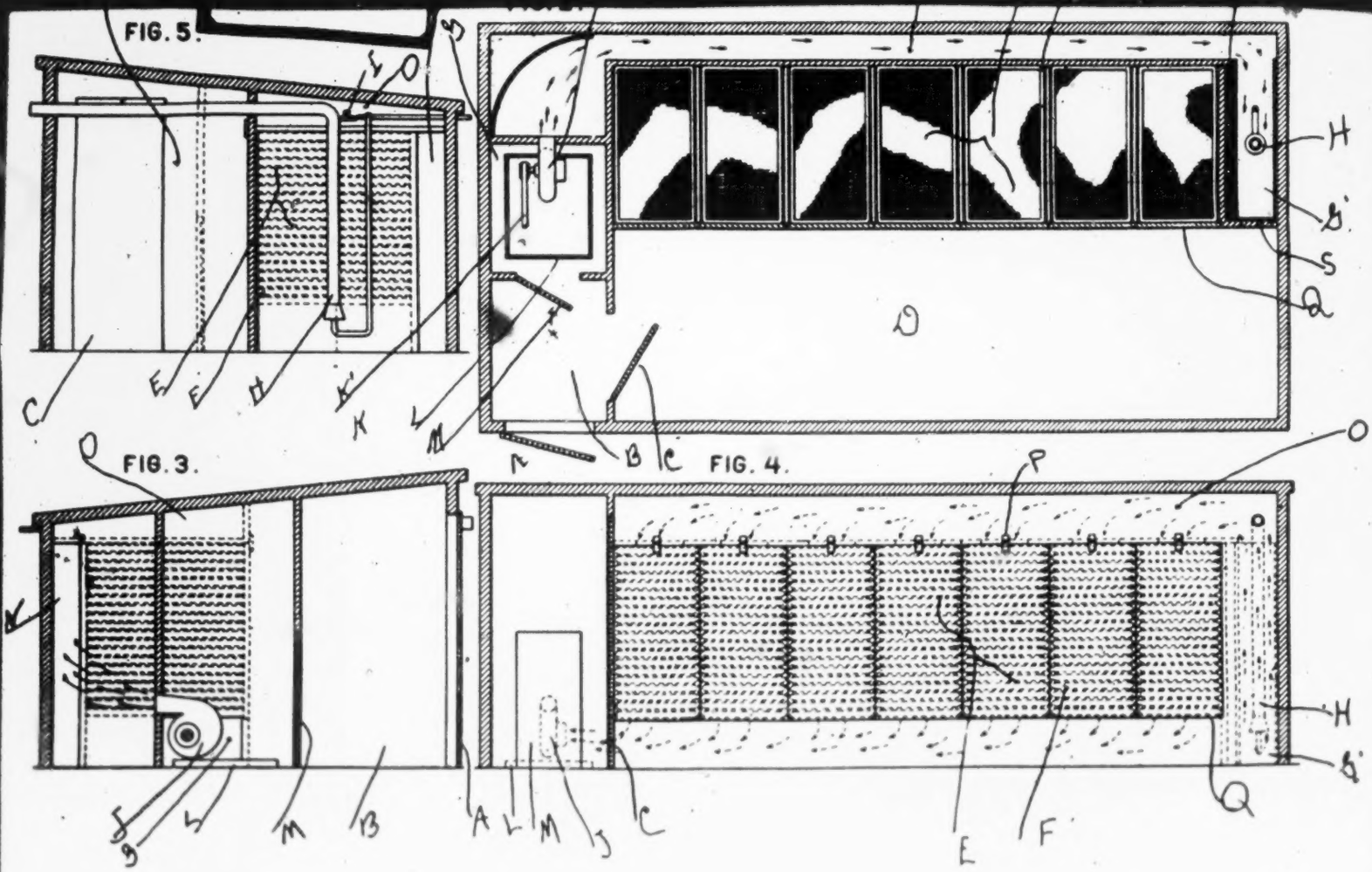
HASTING'S MUSKOGEE HATCHERY
1911-12

Defts' Exhibit 22

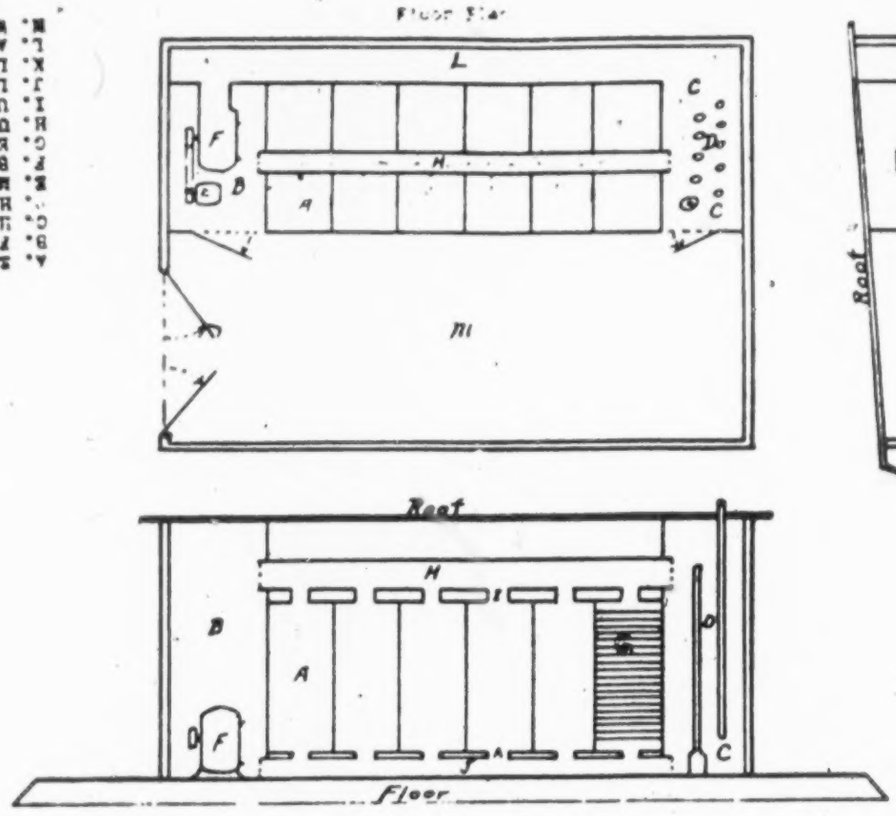
FIG. 1.



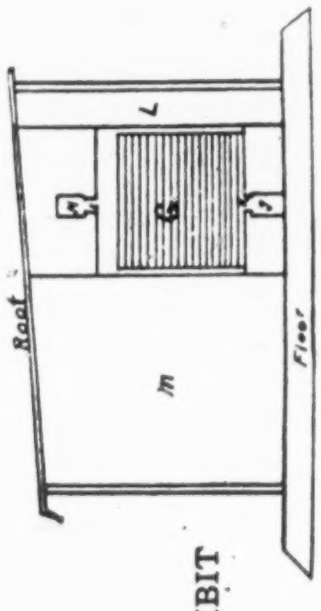

HASTING'S MUSKOGEE HATCHERY
1911-12
FIG. 2.
FIG. 3.
FIG. 4.
FIG. 5.
Depts 2 and 3a
D
E
F
H
S
Q
C
K
L
M
B
P
O



A. Egg chamber
B. Fan chamber
C. Heating chamber
D. Heating pipes or coils
E. Motor
F. Blower fan
G. Egg trays in position
H. Upper air conduit
I. Upper lateral conduit
J. Lower air conduit
K. Lower lateral conduit
L. Air passageway from B to C
M. Work space in front of incubator



Cross section, front view.



Cross-Section, End View

Exhibit "B" to deposition of Louis G. Lerker

PETITIONER'S EXHIBIT

marked 'Figure 6, N. B. H.' I know that incubator was actually used and placed in operation. Yes, sir, it was." (Vol. I, R. 601.)

He thus ties together the record photographs taken under the direction of Hickox, who was also an independent witness, with his knowledge of the incubator as the electrical contractor, and he testifies the drawings were correct. Both Hickox and Peabody are new witnesses and supply the identification of the construction of the drawings by the record descriptions and record photographs made contemporaneously under Hickox direction of the Hastings Muskogee incubator. This supplies the deficiency of proof which Judge Bodine referred to.

As Smith admits that respondent's drawings 22 and 22-A, if proven, show that Hastings was the first in the art of mass incubation with a forced draft (reply brief page 3), and, as the new proof in this case conclusively supports these drawings, with dated records and contemporaneous photographs, our case is proved, whether you rely upon petitioner's witnesses and his Exhibit B or our drawings 22 and 22-A, as they show the same thing in substance.

Elsewhere petitioner takes the inconsistent position that the Hastings incubator was operated in a machine like the drawings, but that the eggs were all of one age in each compartment, although all of the compartments were in forced draft air communication with one another by a common air stream, and that the eggs in the different compartments were of different ages. This Court understands, of course, that we do not agree that the Hastings machine was so set, but even if it was, there was anticipation just the same. Petitioner thus reduces the issue before this Court to the determination of the sole question of whether, assuming for argument that Smith's sole objection to the Hastings prior use was true, namely, that the eggs were

the same age in a single compartment, but of different ages as compared one compartment with another, there still remains **the fundamental fact that egg compartments with eggs of different ages in them were in forced draft air communication with one another.**

We rely upon this Court's interpretation of this patent as the law of the case to the effect that it makes no difference in what order the eggs are arranged so long as the common body of air is so driven in a defined course that it passes over eggs of different ages over and over again, so that the heat of the hotter eggs will be conveyed to the cooler eggs and a substantially even temperature thereby maintained. That is what happened in the Hastings machine as petitioner now admits it operated.

The Hastings compartments were arranged side by side, with open tops and bottoms, and a single fan forcing the air in circuit through such tops and out such bottoms back to the fan, so that the common air stream was split at the top into separate streams passing through each stack of egg trays and these independent air streams were again consolidated at the bottom in a common air stream where they were remixed in the fan. *It is apparent that whatever heat came from the eggs in one compartment would be commingled with the air from other compartments and then redistributed to those other compartments so that there would be a transfer of heat from the hotter eggs to the cooler eggs.*

Therefore, it is conclusive from the reply brief of Smith that he admits two things:

(a) That if Hastings proved the construction according to the illustrated drawings in the Third Circuit before Judge Bodine, in the Court of Appeals and in this case, there would be anticipation. This was proved by his own witnesses and his Exhibit B. (Vol. II, R. 766, 794.)

(b) That we have so proved such construction but that the operation differs from Smith only in that the eggs are all of the same age in each compartment while differing in age in one compartment as compared to another. (Reply brief, pages 15-16.)

The answer to this last proposition is found in this Court's own interpretation of this patent that it makes no difference where you place the eggs of different ages or how arranged, if the common air stream moves over them of all ages in a single box;—that was Smith;—and that also was Hastings.

Petitioner's reply brief contains a grave error at pp. 15-16. It says that Hastings had all the eggs in each chamber of one age and with progressively increasing temperatures of the chambers as incubation progressed, citing pages 51-52 of the record. **This portion of the record was not Hastings' testimony, but Smith's man Taggart, who was testifying as to the old practice in small incubators.**

Smith is very careful in the arguments in his brief about different temperatures in the parallel compartments in the Muskogee incubator to omit always reference to the fundamental fact that, in the Hastings incubator, the forced draft could only circulate from a common fan through these compartments, so that whether the temperature in the compartments was the same or different the heat from the compartments was removed into a common stream of air and that heat was commingled with the common stream of air and again returned to the compartments *so that the heat of the hotter eggs would be conveyed to the cooler eggs.* Indeed, this feature of having a different temperature in parallel compartments is set forth in the Smith patent in suit where it repeatedly says that the temperature may vary from 100 degrees to 105 degrees, and in the trays 12 where the hatching eggs are located in that zone, the temperature must not exceed 105 degrees. (p. 1, lines 40-48,

Smith patent, Vol. I, R. 673.) **Smith had zone temperatures** and used a continuous circulating body of air to control those temperatures. Smith also used a slide for controlling the volume of this air passing through the compartments. See the slides in Figure 1 and Figure 3 for controlling the size of the valved opening 24, which would control the volume of air, particularly cold air, passing through the compartments and, therefore, the temperature thereof. That is what Hastings did, according to petitioner's own theory, in using his slides to control the temperature of the compartments in order to keep them in balance in conjunction with the continuous stream of air.

Smith's temperature varied from 100 degrees to 105 degrees, while he claims there was a variation in the Hastings Muskogee incubator. Petitioner is incorrect in stating that Lieber testified that there were different temperatures in each compartment as a standard practice of Hastings, for Lieber said:

> "I don't say he did that in every case, but it was so equipped so he could do that." (Vol. I, R. 627.)

Petitioner failed to quote that statement.

Hastings used the same body of air in a continuous defined circuit passing over these egg columns and that is what Smith did.

Lieber testified, both in the *Stone* case (Vol. II, R. 782) and later in this case (Vol. I, R. 627) that you could hatch in one compartment or all the compartments depending upon the number of eggs you have. This is also true of the Smith patent. As Smith acquired eggs he moved the older eggs downwardly and put the new ones in their place. As Hastings acquired eggs he moved the older eggs to the next position and installed the new eggs in their place. Lieber so testified as follows:

> "That is, he could start eggs in one compartment, carry on for a few days, and then move them to an-

other compartment and leave for a few days. And then move on for another period until they finally got down to the end. Yes, that is, if he was crowded for space, as new eggs came in he would put the eggs in the first one, and keep on moving them, and he would be putting eggs in the first compartment and taking chicks out of the last one at the same time. And in the intermediate compartments would be eggs further advanced in the incubation." (Vol. I, R. 627.)

POINT IX.

SMITH AND HASTINGS BOTH USED SLIDES TO CONTROL AIR VOLUME THROUGH THE STACKS OF EGG TRAYS.

Petitioner claims that, because Hastings had slides for controlling the amount of air passing through each compartment in its continuous circuit through the compartments and back to the common fan, this showed a difference from Smith. Hastings used these slides because his fan was at one end and the air stream had to be proportioned so that the compartment closest the fan would not get more than its share depriving the compartment furthest from the fan of its share of air. These slides were for the purpose of controlling the temperature by controlling the amount of air flowing in each compartment. Hastings knew, as his publications and patent application showed, that he must have a uniform temperature and that air driven in a blast was the way to get it. Therefore, he had to use slides to maintain uniform temperature. Lieber testified:

> "With that slide arrangement so that that hole in the top could be closed or opened as you wished—just according to the amount of air that he wanted in each compartment." (Vol. I, R. 605.)

Compare this statement with that in the Smith patent as to Smith's slides over the hole 24 for controlling air volume, where he says:

"Coils of heating pipe 23 are arranged in the space 21 to heat the air and more or less fresh air may be taken in through the *valved* opening 24 above the space 21 and this fresh supply of air may be charged with steam to a greater or less degree by means of a valve controlled jet or pipe 26 see Fig. 3." (Lines 36-43, p. 2, Vol. I, R. 674.)

So Smith likewise used slide valves 24 to control the flow of air and the temperature thereof in his compartments.

The Smith machine has different speeds at different places. (Pet's. Exs. 11A and 11C.) Therefore, petitioner's claim that the Hastings compartments would have different air speeds and temperatures due to the regulation of the slides of each compartment, is merely claiming what Smith himself had with different air speeds in the compartments, depending upon the loading of the compartments with eggs. Petitioner's charts of his own machine tests show his different air speeds and therefore different temperatures in his columns of eggs. (See Petitioner's Exhibits 11A and 11C, Vol. I, R. 680, 682.)

Petitioner says that the photograph 26-F was of an experimental hatch. That is true. "Poultry Journal" reported the first hatch at 85%. (Vol. II, R. 1298.) It also claims that the caption placed on the photograph by counsel is incorrect. That is untrue. Petitioner in his main brief tried to tell this Court that eggs could not be hatched anywhere except at one end. This photograph shows that eggs could be and were hatched any place, and the caption mentions this. The photograph 26-D shows that there was no expectation of having the lower trays hatch because every other tray was not taken out to make room for hatching which was the custom in the Hastings incubator. Removing every other tray was done to make room for the hatching chicks and a paper wall was placed around the tray to keep the chicks from falling out. This will be

seen in Exhibit 26-D just after page 34 and 26-D just after page 36. Both photographs 26-D show unhatched eggs and hatching eggs with hatched chicks. The hatching is identified by the paper walls around the trays to keep the chicks from falling out, but no such paper wall is shown around trays in photograph 26-D.

Note that the photograph 26-D following page 34 of respondent's brief shows a calendar of March, 1912. The calendar can be read more easily by referring to the original photograph in the original exhibit filed in this Court.

Petitioner tries to make much of the fact that some of these photographs were taken at different times. That was probably true but they do not deny that the photographs were taken in 1912 of the Muskogee incubator, which is the essential fact. The calendar in the photograph 26-D, opposite page 34 our main brief, fixes the date conclusively and that eggs of different stages were being hatched in that incubator in a single room with forced draft in March 1912.

POINT X.

STAGE INCUBATION AT MUSKOGEE CONFIRMED BY CONTEMPORANEOUS STATEMENTS IN THE HASTINGS FILE WRAPPER.

Petitioner's reply brief asserts that the Muskogee incubator was operated with eggs of different ages in each compartment and that the eggs were maintained at different temperatures. Aside from the fact that the witnesses, Hastings and Lieber, denied this, as set forth in our main brief, that portion of the file wrapper of the Hastings application written after the Muskogee prior use had taken place clearly shows that staged incubation was practiced and that it was *not* practiced in the form *now* claimed by Smith. Let us see what the contemporaneous written record before the Government by Hastings showed at a time when there was no motive to misrepresent.

On May 24, 1912, Messrs. Church & Church wrote thus to the Patent Office, that it had considered the application "together with a mass of data and information derived from a practical hatchery of large capacity which is being operated by the applicant."

Counsel for Hastings were particular in referring to the eggs of different stages being subjected to the mechanical forced circulation of air, but *nowhere did they state that there were different temperatures in different compartments.* It can be safely assumed that lawyers of their skill, seeking to get the allowance of a rejected application, would point out every difference such as this if it had existed.

That statement is entirely absent from this file wrapper and the effort of Smith to read it into this file wrapper *now* in his reply brief is without any foundation in fact. Is it to be expected that such lawyers as Church & Church, giving every detail of this hatchery, including an exhaustive quotation of the report of Hastings, would have excluded a feature of this sort and not mentioned it? Here is what they did say on May 24, 1912:

> "• • • he has by a painstaking and very costly series of experiments discovered that the temperature and gaseous stratification in the incubating chamber must be overcome by a mechanically forced circulation of the air which will insure a correct and uniform influence of the air upon all of the eggs in the incubating chamber, • • •" (Vol. II, R. 744.)

Again in their brief before the Board of Appeals on December 20, 1912, they said:

> "During the incubating process the eggs themselves, especially if assembled in large numbers close together, exert a most marked influence upon the surrounding air, both with respect to temperature and composition, and owing to their inherent temperature changes, they exert a most marked influence upon ad-

jacent eggs due to radiation. For example, during the initial stage of incubation, the eggs absorb heat whereby their temperature is raised, but during the final stages, the vital processes generate heat and in practice it is found that with vast numbers of eggs assembled in a single compartment and with eggs at all stages of incubation but very little extraneous heat need be supplied, because the eggs in the later stages of development supply the necessary heat for the eggs in the earlier stages of development.

"• • • The simple way in which applicant overcame the difficulty was through the provision of a mechanically operated air forcing means which would force a rapid circulation of air through the whole collection of eggs in the chamber and past the heater.

"• • • The claim of the application includes as its mechanical elements an incubating chamber adapted for the reception of superposed trays for eggs to be incubated, means for effecting a distribution of air uniformly to the eggs in the chamber, means for heating the air, and mechanically operated means for forcing a uniform circulation of air through all parts of the chamber and past the heater. • • •

"In the Hastings hatchery, a current of air is blown past each and every egg at the rate of thirty feet per minute and this rapidly moving air quickly bringing the temperature of the egg to approximately that of the air. **This method of heating keeps the temperature of the eggs in the advanced state of incubation down within a few degrees of that of the air,** the exact difference being regulated at will by adjusting the speed of the fan. When properly adjusted the **same blast of air used to heat fresh eggs does equally well for eggs in the advanced stages** just as the same temperature of the body of the hen incubates the eggs at all stages of development, without recourse on the hen's part to the 'hatching fever,' erroneously supposed to explain the higher temperature of eggs at a more advanced state of development." (Vol. II, R. 753-756.)

We particularly call this Court's attention to the following quotation and the words "**whole collection**":

> "The simple way in which applicant overcame the difficulty was through the provision of a mechanically operated air forcing means which would force a rapid circulation of air through the *whole collection of eggs* in the chamber and past the heater." (Vol. II, R. 754.)

This certainly teaches that the circulation of air was over *all* of the eggs of different stages of incubation.

Again, Church & Church say this, showing that the *different stages of incubation were in the same column of trays in the same compartment*:

> "The claim of the application includes as its mechanical elements an incubating chamber adapted for the reception of superposed trays for eggs to be incubated, means for effecting a distribution of air uniformly to the eggs in the chamber, means for heating the air, and mechanically operated means for *forcing a uniform circulation of air through all parts of the chamber* and past the heater." (Vol. II, R. 755.)

Note in this statement the words "a distribution of air uniformly to the eggs in the chamber." Here is the teaching of a single chamber and not a multiple chamber with different eggs in different chambers.

Church & Church then quote the supporting report of Hastings, where he said "a current of air is blown past each and every egg," and "When properly adjusted **the same blast of air used to heat fresh eggs does equally well for eggs in the advanced stages** just as the same temperature of the body of the hen incubates the eggs **at all stages of development.**" He further says "In the Hastings Hatchery temperature stratification is overcome by forcing through the hatching chamber a mechanically impelled blast of air. This rapidly moving air evenly distributed throughout the cross section of its movement by suitable

gratings, results in a more even distribution of heat within a hatching chamber holding many thousands of eggs than is secured in a single egg tray of the most perfect dead air machine. **In the practical plant the entire volume of air passes through the fan every thirty seconds.**" (Vol. II, R. 756.)

Do these teachings of the uniformity of temperature throughout the entire mass of eggs support Smith's claim that this file wrapper shows the use of egg columns of different ages in separate compartments at Muskogee at different temperatures? We think not.

POINT XI.

THE AUTHENTICITY OF THE HASTINGS BLOWER CONFIRMED BY PETITIONER'S OWN WITNESSES AND EXHIBIT.

Authenticity of the Hastings Blower.

In the reply brief and argument petitioner tried to deny that the Hastings blower found on the Hastain farm was genuine. (p. 11 reply brief.) This blower shown in photographs Exhibits 22 B, C, D, E and F (Vol. II, R. 1113-4) is claimed by petitioner not to be the blower that was substituted for the fan at the very beginning of the operation of the Muskogee hatchery by Hastings. Laying aside the fact that this was the only mammoth hatchery in the territory, that petitioner's own witnesses said it had a blower, and that Smith was satisfied to have his man Taggart buy the blower for $50.00, because it was the blower used in the Hastings incubator, what does the Record additionally show?

Peabody, the Westinghouse executive who had no interest in this case, testified that he was the man who installed the original fan, took it out and substituted the blower. (Vol. I, R. 599-602.) Certainly, a man of Peabody's special skill in electrical work, who was the electrical con-

tractor on the job, and who had no interest in testifying falsely, is to be believed. That accounts for the change and substitution of the blower for the fan by the man who had done the work as the electrical contractor.

Petitioner's own witness, Anderson, testified as to a change in the fan. (Vol. II, R. 769.)

Lieber, who owned the blower, said it was a "Sirocco" blower of the American Blower Corporation of Detroit, and that it was purchased early in 1912. (Vol. I, R. 614-615.) He accounted for this blower from the time it was used by Hastings in 1912 until it was located on his partner's, Hastain's, farm, where it was stored, saying "Now there is nothing left of it that I know of but the blower. That is the blower that was substituted for the fan originally. That blower is still in existence. It is out on Mr. Hastain's farm. I have had photographs taken of that blower lately." (Deft.'s Exs. 22 B, C, D, E and F, Vol. I, R. 607.) Hastings testified as to the substitution of the blower. (Vol. I, R. 516.)

It is significant that in the drawing produced by petitioner as Exhibit B attached to the depositions in the *Stone* case, which petitioner introduced into this case (Vol. II, R. 794), **it is a blower that is shown, and not a fan. It is called "F. Blower Fan."** We should say from this that petitioner is bound by its own Exhibit B, its own description thereon and by its own witnesses and by trying to buy the blower itself.

The photographs of the blower show the blower which was found on Lieber's farm when this testimony was taken, and it was the same blower that Smith's man, Taggart, tried to buy for Smith at Smith's direction in 1926. That is not denied. Taggart testified the size of the blower he saw in 1926 "was the same as it is now, 12 inches outside diameter." (Vol. I, R. 663.)

Does this look like there was no proof that this was the blower? If so, why did Taggart try to buy it for Smith? That act of petitioner has not been explained away. The Hastings prior use was the only one in the Muskogee territory; therefore, this blower must have been in the Hastings invention or else there was no reason for the attempt to buy it. Peabody said:

> "We installed the ventilating equipment for him and did the electric wiring. I can tell you what means were provided in the hatchery there for ventilating purposes. The idea was, of course, to supply a mechanical means of putting warm, fresh air through these egg compartments at the proper temperature in this commercial hatchery. The first installation we made was a propeller type ventilating fan. My attention is called to a photograph appearing on page 84 of the album which has been introduced in evidence in this case as Defendants' Exhibit No. 26, this photograph being marked 'Figure 2' with the initials 'N. B. H.' on it. That is the ventilating fan that we installed in this commercial hatchery for Mr. Hastings. It was made by the Emerson Electric & Manufacturing Company of St. Louis. Installation was made, approximately, in the Winter, Fall and Winter of 1911 and 1912. I can't designate the exact day or week or month, but within a period there of three or four months. Well, this fan is like many others that we bought from the Emerson Electric & Manufacturing Company through the Commercial Electric Supply Company in St. Louis, and the normal speed in such installation is 1150 R. P. M. I know that a change was made in the installation in connection with the ventilating or circulation of air in that incubator. Well, this propeller type fan was found not to exert sufficient pressure to force the air in sufficient quantity down through these egg racks and we changed this to what is called a sirocco blower. Well, as I said, this installation was made in the early Fall or Winter of 1911, and this change was made as I recall it—I could not fix the exact date,

but within six to eight weeks after the original installation was started up. I personally had something to do with the installation of the ventilating means in that incubator. I had supervision of it. I had mechanics working for me that did the actual work but I had supervision of it. I saw the incubator itself in operation. • • •

"This represents the general scheme that was employed in supplying warm, fresh air for this incubator. However, this diagram showing the thermostat here is not the one that I saw. The one I saw was more or less of a home-made affair that Mr. Hastings had rigged up himself. This looks like a more finished product than the one he had, but the general circulation of air and the general scheme of warming this air and introducing it through these racks is as was used in that incubator. • • •

"This is the installation that I saw there. This is the rather crude-looking switch and thermostat device marked 'Figure 6, N. B. H.' I know that incubator was actually used and placed in operation. Yes, sir; it was. • • •

"I could not tell you anything at all of the revolutions per minute of the motor operating the blower which I have referred to, because I do not have the same information that I have on this propeller type fan because it was a bolted-up outfit that was used for this purpose and it would all depend on the size of the pulleys used on the motor and on the blower. It might be anything from 600 to 1800 revolutions per minute. That blower was not furnished to Mr. Hastings by me or my company. It was a blower that we had furnished to Judge Lieber some time previous and adapted to this purpose. We installed it.

"Cross Examination by Mr. Ely.

"When this blower-fan was installed in the incubator it was put in the place of the other type of fan, the earlier type of fan. That is right. It was substituted therefor." (Vol. I, R. 599 to 601.)

Lieber said:

"A. Some years ago when the Buckeye people of Springfield, Ohio, I believe it is, anyhow, the Buckeye people were suing a man by the name of Cooley in New Jersey, I believe it was. I think it was Mr. Taggart who then represented them, sent me a telegram offering to pay me $50.00, I believe it was, for the blower.

"Q. Was that sale consummated or made?

"A. No, sir.

"Q. Why not?

"A. In my answer to the telegram I made a condition of the purchase that it was not to be used—not to be destroyed—and was to be used for exhibition purposes only." (Vol. I, R. 610.)

In the petitioner's reply brief he tries to infer that Hastings offered to sell out to Smith to conceal the prior use and that Smith declined. Petitioner's brief reads as follows:

"Also, if Smith had desired to suppress evidence of Hastings' prior efforts he might have made such a deal with Hastings when the latter called at Smith's Cleveland office in 1917 on his way to Tiffin, Ohio, when Hastings offered to 'co-operate' with Smith for a consideration (James R. p. 576 to 577)." (P. 11, Pet's. Reply Brief.)

The best reply to this misconstruction of the word "co-operate" is to quote Hastings' testimony on this subject:

"I do not remember the detail of any suggestions or [fol. 820] correspondence that I may have had with Dr. Smith at that time, except the general intent to co-operate with him in this field instead of competing with him." (Vol. I, R. 577.)

POINT XII.

RECORD REFUTES PETITIONER'S REPLY BRIEF AS TO HASTINGS' SUCCESS AND OPERATION.

Petitioner's reply brief summarizes (page 21) the testimony of a number of witnesses, but misinterprets or partially quotes their testimony. To correct these misleading and incorrect or incomplete statements, we are placing, one directly following the other, the statements from petitioner's brief and the quoted Record statements of the witnesses in refutation thereof.

Petitioner's Reply Brief Statement.

"Hickox testified that he had no connection with the enterprise and no one would have 'kicked' to him if the incubator had not worked properly. (James, R. p. 598.)"

Record Statement Rebuttal.

"I visited that incubator and saw it myself." (Vol. I, R. 586.)

"The activity of an incubator was quite unusual, and **one of my duties in my position** at Muskogee that I was charged with by the Byllesby people was to see that Muskogee and our company received as much publicity as possible. To do this **we naturally selected the unusual uses for electricity and gas and made photographs of them, wrote up stories and sent them out to the various electrical trade papers** and in that way received considerable publicity for Muskogee. To my knowledge there was no other hatchery comparable in size and capacity in Muskogee, Oklahoma, with that of Mr. Hastings' that I have referred to, at that time." (Vol. I, R. 587-588.)

"I first became acquainted with Mr. Hastings in the late Fall of 1911 and knew him for some months after that or up into the early part of 1912. I became acquainted with Mr. Hastings in the same manner that I became acquainted with any new man that came to

the city and engaged in any business in which he would use either electric current or natural gas that our company furnished; by contact with him in order to arrange with him for supplying such service as he would need in his business. I stated that he was engaged in the hatchery business." (Vol. I, R. 585.)

"I probably visited the Hastings' incubator five or six times." (Vol. I, R. 593.)

"And so far as the Hastings' business was concerned, to my recollection every time I was ever there there was business being done. People were either bringing eggs to be hatched or were taking away baby chicks, as I recollect it, from their own eggs or were purchasing baby chicks that were being sold there as freshly hatched." (Vol. I, R. 594.)

"In my opinion it was a going business." (Vol. I, R. 594.)

"Q. I will ask you whether or not during your life at Muskogee, Oklahoma, you ever heard any adverse criticism of this incubator either with respect to its being a practical operative device or failure while you were there in Muskogee?

* * * * *

"A. No, I did not." (Vol. I, R. 594.)

"After these pictures were taken I visited this incubator—oh, probably four or five times. * * * As to what period I visited this incubator, well, to the best of my recollection, it must have been during the time that he was hatching there, after he was in operation. I can't just say how far apart or how close together my visits were. I was interested in the thing because of its novelty and when I went by that way I stopped in. I went there several times during that period; I would say about a half a dozen times altogether, during the entire time." (Vol. I, R. 598.)

"I will say this, that according to our custom with any customer if anything would have happened to this enterprise so that it would have gone out of existence leaving any unpaid light or gas bill that I would have heard about it." (Vol. I, R. 598.)

Petitioner's Reply Brief Statement.

"Peabody testified (James R. p. 601) 'Whether it hatched eggs or not that would be something that would not come to me.' "

Record Statement Rebuttal.

"**I saw the incubator itself in operation.**" (Vol. I, R. 600.)

"**I know that incubator was actually used and placed in operation. Yes, sir; it was.** I did not hear any criticism either of Mr. Hastings personally or the operation of that incubator. • • • The only comment that I ever heard about the installation was that it was satisfactory." (Vol. I, R. 601.)

Petitioner's Reply Brief Statement.

"Lieber was so thoroughly disgusted with the whole enterprise that after it was all over he would have nothing more to do with any incubator whatsoever. His experience with the Hastings incubator soured him on all incubators—'one was enough for me.' (James R. p. 631.)"

Record Statement Rebuttal.

"In other words, I did not make money out of my investment in that incubator." (Vol. I, R. 607.)

"Q. Did you intend to give the impression that the operation in 1913 was successful?

"A. **So far as the operation of hatching chicks was concerned it was, but financially it was not.**" (Vol. I, R. 622.)

"Q. But Mr. Hastain was about the incubator quite a bit during 1912, wasn't he?

"A. Yes, sir, he knew more about it than anyone outside of Milo Hastings.

"Q. But he ran it in 1913?

"A. Yes, sir, he made it hatch but didn't make any financial success." (Vol. I, R. 624.)

"In connection with Mr. Dierfield's putting this $500.00 into the Corporation that I was asked about,

that occurred—it was after Mr. Hastings had quit the hatchery and before the next hatching season. And he was a brother-in-law of Mr. Hastain. He is the one that operated it in 1913, he and Mr. Hastain together." (Vol. I, R. 634.)

Petitioner's Reply Brief Statement.

"Pitts testified that the percentage of hatch was very low and 'he didn't have very good chicks, and the chicks that were hatched were rather weak.' (James R. 637.)"

Record Statement Rebuttal.

"Well, I think he came here around December. I heard the boys talking about it, and I think he started up in January 1912. I mean he started the operation of an incubator here in Muskogee about 1912, about January is my recollection." (Vol. I, R. 635.)

"I had occasion to visit that incubator that Mr. Hastings was operating. On several occasions. I remember one time we all had a Poultry Show here and we all went over one night and he wanted to show us around, and the reason I remember so well it was zero weather. That was 1912. The incubator was being operated at that time. It had eggs in it. **I never had any eggs myself placed in that incubator for hatching.** I was running two Cyphers myself and doing custom hatching besides. **I never placed any eggs myself in Mr. Hastings' incubator for hatching.** He ran it until May or June, I think, and then I think he left here. It has been a long time ago to remember things. **That incubator was operated throughout 1912.** Then he had a little poultry farm out here, and then I lost track of him. I think he left here. The next season I think Mr. Lieber operated it but I never visited it that year. I was in it two or three times after that cold night. **It hadn't been running long enough at that time to know what it would do when we visited it—the Association visited it.** I just remember going into a brick room and it was awful hot in there, and it had trays all

around in there. That is all I remember in there; going from zero to 103, I can remember very well. Eggs were in these trays. I saw Mr. Hastings there at that time. He was demonstrating the machine to this Poultry Association. **I didn't know then anything at all of the percentage of hatching of eggs that were placed in there. I was there later though and saw chickens hatching and eggs pipping and half out.**" (Vol. I, R. 635-636.)

"A. **That is all I know now. I know they hatched some chickens but what percent I don't know, but they did hatch chickens.**" (Vol. I, R. 638.)

"A. All I remember, the eggs were in trays, in tiers, and I don't remember which side, but the heat and the eggs was all in one room."

"A. Yes, I remember it so well, because it was zero outside and when we were in there it was 103.

"Q. Do you remember how the air current, or currents, were formed?

"A. I know that he used a fan." (Vol. II, R. 789.)

Petitioner's Reply Brief Statement.

"Brewer did not know whether the chicks he received were hatched from his own eggs or supplied from other sources and consequently he knew nothing of the percentage of hatch secured. (James R. p. 641.)"

Record Statement Rebuttal.

"I saw it a good many times; we hatched off quite a lot—had him hatch for us quite a lot of eggs there.

"**I suppose we had as many as two (200) or three hundred (300) eggs hatched.** By 'we,' of course, I mean my wife and I. I mean we would take eggs down there to be hatched, and I might add—I don't know if you want to know about it—**we sold the Company eggs to be hatched, too, and we delivered them these once or twice a week. That is, in addition to the eggs we had hatched ourselves. We had in the neigh-**

borhood of 200 or 300 hatched ourselves. And then we sold in addition, eggs to the Company to hatch. The total of eggs which we turned over to this incubator to be hatched, including the ones which we hatched ourselves and the ones we sold to them for hatching, well, I would think probably a thousand (1,000) or more; somewhere in that neighborhood.

"As to the result of the eggs which we turned over to be hatched ourselves, well, we considered it fair results, good results, satisfactory. Well, I believe that they claimed that they would give a 70 or 75% hatch, and we had been hatching with hens, and, of course, we only had a small plant of our own, and we received along about that percentage of hatches. Somewhere about that—from 70 to 75% of the eggs which we turned over to them would be hatched chicks. I think we continued to patronize this incubator throughout the season of 1912. I think so. We didn't hatch any very late ourselves. We kept on selling eggs until about the close of the season I think."

"I know other people brought eggs to the incubator to be hatched." (Vol. I, R. 639-640.)

"As to whether the chicks delivered to me by Hastings were the chickens hatched from those eggs, I am under the impression they were. You want me to tell why? Because we were handling some high priced chickens and we kept an eye on it closely. There were not so many Rhode Island Reds raised in this community at that time. That was kind of the commencement of the Rhode Island boom here in this town. But so far as I know, so far as my knowledge is concerned, the chickens we got from Mr. Hastings might have come from some eggs other than ours. Well, of course, they might have." (Vol. I, R. 641.)

The Court will understand that the percentage of a hatch depends upon the fertility of the eggs. The fertility of the eggs in turn depends upon health and quality of breeding of the flock. In some communities and in some seasons of the year, the fertility is lower or higher than in

others. For instance, the percentage of hatch in the Smith machine has been as low as 50%. Taggart testified the Smith machine ranged from 50 to 70%. (Vol. I, R. 53.) This is the same as the approximate percentage of Hastings. Taggart admitted that the skill of the operator was important. Certainly after these many years of experience with mammoth machines, the operators are of greater skill than those in the earlier years. Taggart testified in the *Snow* case before this Court:

> "A. *The results varied greatly with the incubator and the skill of the operator and of course with the condition of the eggs. In 1909, at the time I was especially interested in the work in college, a 50 per cent hatch on the average was considered good.* We would have individual cases, where it would run up well over that, but *the average hatch, if we got 50 per cent, we supposed it was good.*" (Vol. I, p. 63, Snow Record.)

He further said in this same case:

> "It is a safe average to say that all the Smith incubators out, if given reasonable attention, will average 65% hatching for the season."

He further added:

> "When I was working with incubators in college, a 50% hatch was considered good, that is, on the average." (Vol. I, R. 112, *Snow* case.)

This would mean that Hastings' average hatch of 50% was the average according to Smith's own witness that was producible from the eggs of that day, according to the standards of fertility of the flocks and eggs of that period. Of course, an incubator cannot produce a greater percentage of eggs than is possible according to the fertility of the eggs, and as during the Hastings period 50% was the average hatch, according to Smith's own man Taggart, certainly Hastings' performance in producing

the same 50% average shows that his machine was successful. In any event, it is close enough to 65% to show that it was a successful reduction to practice of the invention.

Petitioner's Reply Brief Statement.

"Campbell 'thinks' the incubator was a success, but he did not know how many chicks his parents received, or the percentage of hatch. (James R. p. 642.)"

Record Statement Rebuttal.

"I saw the incubator in operation myself. It seemed to me that it was made out of a—it was a room converted into an incubator; **was sort of a marvelous thing to people in those days, because seemed to me it was the very first one anybody ever walked inside of.** You opened a door and walked right in and **there were chickens and trays there of eggs.** It was a brick floor, I think, and he had some kind of a circulating system, and he had chickens hatching in there, thousands of them; an awful mass of eggs and chickens seemed to me when I was a boy; don't know how many there were but seemed like a lot of them." (Vol. I, Rec. 642-3.)

"I saw the incubator in operation several times. It must have been 1912 because we came here in August, 1911, and that was too late to hatch chickens and we hatched chickens the next year. I paid for having those chickens hatched. They were all our eggs that we had custom hatched. They were Rhode Island eggs I suppose. That is the only kind we had on the farm.

"I do not recall what kind of circulation that was in the incubator. **Was a terrible roar in there. I know it had some kind of fans.** Seemed most trouble with Hastings was mixing up his chickens. Most people complained of taking Rhode Island Red eggs there and getting Barred Rock chickens, and vice versa. I mean that was the current talk. He was all head over heels in his invention and he forgot about the business end of it. Don't think he ever made it pay."

"My trade was that of a carpenter. **From my experience as a carpenter, and my knowledge of the incubator business in connection with that one operated by my wife in which I help, I think this incubator was a success for those days. It hatched chickens undoubtedly.**" (Vol. I, R. 643.)

Petitioner's Reply Brief Statement.

"Cory's experience was disastrous. He never received a single chick from all the eggs he took in. It was a 'complete failure.' (James R. p. 45.) Respondent's excuse for this is that Hastings stole Cory's chicks (James Brief, p. 645)."

Record Statement Rebuttal.

"I was hatching eggs from the same flock at the same time, and selling eggs. From the eggs I hatched I got, oh, fair hatch, sometimes three-fourths hatch and *sometimes 50%*. So far as I know, there was no reason why my eggs wouldn't hatch, that is, there was not anything attributable to the eggs. I think not. The same eggs which I took to the hatchery, those eggs hatched for other people. Yes, sir, fairly so. **Yes, I had complaints from other people as to my eggs,** but no complete failure except the eggs I took to Mr. Hastings. I had fair results, or what I would say was fair results, from the eggs which I took to hatch elsewhere." (Vol. I, R. 645.)

"I went on the inside of the hatchery a few times. **I saw it then in actual operation.** I can't tell from memory how long it continued to operate. I don't know. **Well, it is my opinion that it operated throughout the whole hatching season of 1912.** I can remember the circumstances of Milo Hastings leaving, but when it was, I can't remember." (Vol. I, R. 646.)

"At that time I thought some of those eggs hatched.

"I heard that Mr. Hastings was operating sort of a breeder or place where he was raising chickens a little north of Muskogee. I don't know that. I heard it though. **At the time it wasn't my idea that Mr.**

Hastings hatched some of my own eggs and took them and put them out on this farm, but I might have thought it the next year afterwards after hearing talk. I did hear such talk as that: That he would take eggs in and tell the people that brought them in that they didn't hatch, and then he would hatch those eggs and take them out on his farm. I heard the talk." (Vol. I, R. 647.)

Petitioner's Reply Brief Statement.

"Shanafelt, an experienced poultryman, received a 'very poor hatch' (not more than 7 chicks from 200 eggs) in his one experience with the incubator (James R. p. 648), and testified that the poultrymen around Muskogee 'were very much disappointed' with the results Hastings obtained. They had been led to believe that the Hastings hatchery would be a very valuable addition to the enterprises of the town of Muskogee, but they were doomed to disappointment. (James R. p. 649)." (Pet.'s Reply Brief p. 22.)

Record Statement Rebuttal.

"As to the sort of a fan that I saw in there—I am not very clear, but to the best of my memory it was something similar to something, say about a fourteen inch electric desk fan, as you will see today; used also in [illegible]ns outside; and I believe it was stationary, and to the best of my memory it was a fan of that nature set in there for the purpose of circulating the air, or something.

• • • • •

"Of course I can describe the arrangement of the shed and everything he had in it. That fan is the type of what you call a 'rotary desk fan.' That is what I thought it was at that time, to the best of my memory, but that has been so many years ago and until recently my attention not being called to it. I stopped and studied over it and just recall the location of it and the general principle, and while, as I say, I may be mistaken, I was under the impression that he had

something like an ordinary desk fan, one of these fourteen inch fans, but I don't want to call the set-up of it right at that time. I wouldn't want to be positive. I like to be fair on those things." (Vol. I, R. 649-650.)

"I went into the Hastings Incubator and looked at it. That was where I saw this fan arrangement that I spoke of. As to its being just a similar sort of a fan as the exhaust fan that you see in a movie house, for instance, I can't recall it that way. My memory is not right clear on it but I was under the impression that when it was set up—forget whether it had some sort of funnel for the fan or the fan was setting up on a shelf, to circulate the air. The machine was in actual operation when I saw it there. **I don't know whether it was hatching chicks or whether it had. Mine may have been one of the first batches put in. I know it was right in its infancy, when it first opened up that the various breeders decided to put some in to see what it would do, and we were anxious to help him get started and going. I know that he did actually hatch chicks in that incubator, regardless of the percentage of the hatch, I am sure, at that time, I got—seems to me it was two or three chickens out of my batch that were white chickens and I was breeding black chickens. I know it hatched some chickens.** In other words, it may have been there was something wrong with the handling of the eggs, so that when you went to get the chicks which had been hatched, you got chicks of a different breed from the eggs you left with Mr. Hastings to be hatched, I wouldn't say. I know there was something wrong with it. I don't know what it was. I am not an Incubator Expert." (Vol. I, R. 653-654.)

"Q. That machine was operated throughout the hatching season of 1912, wasn't it?

A. *I am pretty sure it was.*" (Vol. I, R. 655.)

Petitioner's Reply Brief Statement.

"Ward's testimony is that Hastings never got over 50% hatch. In other words, Hastings high point was 50%—not his average as respondent James would have

it believed. His averages must have been very low if 50% was his high. (James R. p. 657)." (Pet.'s Reply Brief, p. 22.)

Record Statement Rebuttal.

"I am positive that from my visits to this plant where Mr. Hastings was operating, that the thing was actually in operation and did hatch eggs, regardless of the percentage of the hatches. Yes, sir. And that was throughout the hatching season of the two seasons that I remember, and I think it was in 1911 and 1912." (Vol. I, R. 661.)

Cory testified eggs hatched by him on the farm at that time were getting 50% hatches, saying:

"From the eggs I hatched I got, oh, fair hatch, sometimes three-fourths hatch and sometimes 50%." (Vol. I, Rec. 645.)

"Poultry Culture" article reported an 85% hatch of the Hastings machine:

"Although temperature and humidity controls were convincing to the inventor, the Muskogee public waited dubiously for Mr. Hastings' first hatch and it was not until *164 lively youngsters broke forth from 192 fertile eggs,* (250 placed in machine) that local faith in the big incubator became general. Our last report finds 158 of these chicks a week old and without an ailing one in the flock, five weak or defective members having been killed during the first three days and one since drowned in a water pail." (Our main brief, p. 56; Vol. II, R. 1298.)

Petitioner's Reply Brief Statement.

"Anderson took from 150 to 200 eggs to the Hastings hatchery, and got 5 chicks. He said, 'I got disgusted and quit' (James R. p. 769) because he took fertile eggs to the hatchery and received no results (p. 770)." (Pet.'s Reply Brief, p. 22.)

Record Statement Rebuttal.

The witness was referring to the first fan, which gave insufficient air, that caused the installation of the larger fan or blower by Peabody. Taggart later tried to buy this blower for Smith. The early failure to hatch with the first fan was admitted candidly by Hastings, but he got the results with the later blower during the rest of the season, showing he understood what to do to practice the principles of his invention. This testimony of Hastings, Peabody, Lieber and others establishes the fact that the blower of Exhibit 22 B, C, and D was installed.

"A. The first fan that was put in was a fan similar to what we see in the restaurants, to drive the hot air out; later on there was a large rotary fan, like you might have in your office, was the only fan I saw. The rotary fan, as it revolved, would throw the air to one side and as it would come back, would throw to the other. I never saw the blower they had in, not to my recollection." (Vol. II, R. 769.)

"Q. The means of conducting the air and forcing the air through the incubator, was changed several times?

"A. Yes, sir.

"Q. You stated there were certain changes made, and these changes took place in the early part of the season, because you stopped paying attention to it?

"A. When I got disgusted I quit paying attention to it." (Vol. II, R. 770.)

"Q. Did you, in company with others, visit the Hastings Hatchery during this show?

"A. I did.

"Q. Were they operating at that time?

"A. Just started." (Vol. II, R. 770.)

Petitioner's Reply Brief Statement.

"Hogan took a few chicks in payment for cleaning some clothes but knew nothing about the results secured at the hatchery. (James R. p. 787)." (p. 22 Pet.'s Reply Brief.)

Record Statement Rebuttal.

"Q. Did you have any experience or business dealings with the hatchery?

"A. Well, I bought baby chicks from them.

"Q. How many did you buy?

"A. I could not say, it has been so long.

"Q. Do you remember the price you paid?

"A. No, I could not say, I just remember getting the chicks. I was there several times, I could not say just how many, just a few, probably fifty." (Vol. II, R. 786.)

POINT XIII.

REPLY TO PETITIONER'S OBJECTION TO "THE DOLLAR HEN."

The broad interpretation now given to the Smith patent makes "The Dollar Hen" a complete anticipation. Smith's only objection to "The Dollar Hen" being a complete disclosure is that it only teaches the use of egg compartments having eggs of different ages in the different compartments, according to Smith's interpretation of this publication. Smith further says that his interpretation is confirmed by the fact that this was the practice followed by Hastings at Muskogee. He says:

> "The fact that in his later installation at Muskogee, Hastings did this very thing, shows that this was the procedure which he had in mind when he penned 'The Dollar Hen.'" (p. 4, Smith's Reply Brief.)

So, we find "The Dollar Hen," upon Smith's admission, anticipates by its publication the Smith patent because this Court has said that it makes no difference in what order you arrange the eggs so long as all of the eggs of different stages of incubation are in the path of a common air stream. What difference would it make in the transfer of heat from hotter eggs to cooler eggs if the eggs are arranged according to age in horizontal zones, as Smith

claims Hastings did, as compared with arranging the eggs according to age in vertical zones as Smith taught, if, in both cases, the common air stream passes over all eggs of all ages? This question has already been answered by this Court when it said it made no difference how the eggs were positioned.

In the *Waxham* and *Snow* cases, the eggs were placed in irregular order (sandwiched with hot and cold) and this Court held that this was still within the Smith patent. So, we rely upon "The Dollar Hen" and the Hastings prior uses being an anticipation in view of the fact that the only difference petitioner ever claims is that the eggs in different stages were in separate compartments subjected to a common air stream so that the heat of the hotter eggs could be transferred to the cooler eggs. We quote from "The Dollar Hen" as follows:

> "The writer now wishes briefly to describe the plan of construction and operation of a *new type of hatchery*, the success of which has recently been made feasible by inventions and technical knowledge hitherto unavailable. The plan of the hatchery is on that of a cold storage plant as far as insulation and general construction go. The eggs are kept in bulk in special cases which are turned as a whole and may rest on either of four sides. **At hatching time** the eggs are spread out in trays in a special hatching room which is only large enough to accommodate chicks **to the amount of one-sixth of the incubator capacity, for twice a week deliverings, or one-third if weekly deliveries are desired.**
>
> "There are no pipes or other sources of heat in the egg chambers. *All temperature regulation is by means of air heated* (or cooled as the case may be) outside of the egg rooms and **forced into the egg rooms by a motor driven cone fan, maintaining a steady current of air,** *the rate of movement of which may be varied at will. The air movement maintained will always be*

sufficiently brisk, however, to prevent an unevenness of temperature in different parts of the room. * * *"* (Pages 104-5, Respondent's Ex. 13; Respondent's Main Brief, pp. 15-16.)

This quotation shows that no matter how Hastings proposed to arrange the eggs, they were subjected to a common air stream for the purpose of heat transfer from the hot to the cold eggs and the maintenance of a uniform temperature so that mass incubation could be practiced through the use of a forced draft for this purpose.

Smith's reply brief argues that it was the common practice at the time of "The Dollar Hen" publication and the Hastings prior use to set all of the eggs at one time and not at intervals. *This record flatly refutes* this statement in Smith's reply brief. It is noted that counsel for Smith did not cite any record reference to support this statement because Smith's own expert witness, Taggart, admitted that setting eggs at different stages in the same compartment was an old practice common amongst farmers and hatcherymen prior to Smith. He said:

"Prior to 1915, farmers who had incubators of the single tray type may have repeatedly put eggs of different ages, different stages of incubation, in the same tray, in the same incubator, and subjected those eggs to conditions of heat, moisture, ventilation and exit of foul air.

"I know it was not the practice; it was not the custom, and it was not the recommendation of the manufacturers at all. I do not deny that it was done. I have done it." (Vol. I, R. 164.)

"The use of air circulation of some sort, the use of fresh air and the use of letting out foul air, the use of moisture and the use of heat, were all elemental facts applied in incubation prior to 1915. The conservation of moisture by [fol. 240] regulating the ventilation openings was one of those things that a man did when he had an incubator prior to 1915." (Vol. I, R. 165.)

The prior art in this record shows that it was common practice to set eggs at different stages. Meschter, No. 347,946, lines 33-48, p. 2, Vol. II, R. 961; McAslan, No. 540,107, lines 10-15, p. 1, Vol. II, R. 970; and Bell, No. 691,837, Vol. II, R. 974, in which a single compartment contains eggs of different ages arranged in a stack of trays. This last specification says:

> "It is furthermore designed to provide for effectively ventilating the interior of the device, so as to preserve a proper temperature for the unhatched eggs and also for the recently-hatched chickens, and at the same time prevent the incubator from being chilled too rapidly." (Lines 14-21, p. 1, Vol. II, R. 974.)

Perkins, No. 798,697, shows mammoth incubation with eggs of different ages. The specification says:

> "This invention relates to an incubator which is more particularly designed for hatching eggs continuously on a large scale.
>
> "The objects of this invention are to produce an incubator of this character in which the egg-trays are moved intermittently from the time they enter the machine through a succession of compartments in each of which the temperature is regulated to suit the requirements for hatching the eggs at that particular time; * * *." (Lines 8-18, p. 1, Vol. II, R. 980.)

This Perkins patent further says:

> "In the operation of the incubator the carrier is advanced the extent of one tray-space every twelve hours and a new frame and egg-laden tray are placed upon the carrier after the same has been thus advanced." (Lines 85-89, p. 4, Vol. II, R. 983.)

Stulik German Patent No. 155,917, of 1901, says:

> "In connection with the incubating (hatching) processes hitherto used in which the different compartments of the incubator were filled in batches and in which the batches of eggs placed in the incubator at

different times were treated simultaneously, not sufficient attention has been given to the maintenance of a uniform temperature throughout the entire incubator space." (Lines 1-7, p. 1, Vol. II, R. 1011.)

This Court has found that this patent did disclose the "simultaneous treatment of the batches of eggs placed at different times in the incubator," when this Court said:

"The German patent, Stulik, No. 155,917, issued in 1901, disclosed the arrangement of trays of eggs in **staged incubation** in an enclosed column or stack, with the endothermic eggs at the bottom." (*Smith v. Snow*, 294 U. S. 16, Pet.'s Ex. 2, p. 12, Opinion.)

The Court also found:

"Other patents named, as Winkler, No. 286,756, of 1883, and Zimmer, No. 1,075,747, of 1913, show types of **staged incubation.**" (p. 12, *Smith v. Snow*, Opinion in Pet.'s Ex. 2, 294 U. S. 17.)

This Court also found that a publication of 1867 disclosed "**eggs in staged incubation** were placed in a closed room **heated by hot water pipes**, but without other means of **producing currents of air.**" (*Smith v. Snow*, 294 U. S. 17.)

In view of the fact that petitioner's witness, Taggart, admitted that it was common practice amongst farmers to put eggs of different ages in the same incubator and this Court has found that this was disclosed repeatedly in the art, petitioner can hardly say, as it does in his brief, that "the universal practice at the date of this publication was to set all the eggs in an incubator or egg chamber at one time." (p. 4, Pet. Reply Brief.) It further says as to "The Dollar Hen" that this publication must be read in the light of the knowledge of the art at the time of its appearance. (p. 4, Pet. Reply Brief.) That art, as this Court has found, and as this record additionally shows by practical witnesses, customarily used eggs in different stages

of incubation in a single compartment for the very good reason that there would not be enough eggs from flocks of the farmer to completely fill up the incubator at one time. (Petitioner's witness Taggart, Vol. I, R. pp. 164-5.)

This Court found that stage incubation was old before Smith. It also found that forced draft was old before Smith. (294 U. S. 16, 17.) It sustained the Smith patent on a combination of those two. **But that combination was first suggested and made by Hastings and not by Smith, as shown by the proof herein.**

"The Dollar Hen," in the light of this custom practice of stage incubation, shows that Hastings contemplated not only this established practice but the obvious necessity for it because the greater the number of eggs handled, the more difficult it is to get them all of the same age at the same time. It is almost inevitable that the thousands of eggs would have to be of different ages.

The next objection to this publication in petitioner's reply brief is that the "Poultry Culture" article of Hastings recognized the difference in temperature of eggs of the same age in the compartment and that, says petitioner, is what Hastings referred to. (p. 5 Petitioner's Reply Brief.) A reading of the "Poultry Culture" article, Vol. II, R. 1115-16, 1298) shows, however, that **the quotation taken by petitioner referred to stacks of eggs of different ages which had been used prior to Hastings unsuccessfully because of the heat problem and, therefore, Hastings used the forced draft to solve the problem.**

The "Poultry Culture" article, instead of referring to different heats due to the eggs of the same age, *was referring to the problem of different heats of eggs of different ages,* as the context clearly shows, because, later, the "Poultry Culture" article says: "While this provision for varying the air temperature at different stages of incubation is requisite to careful work, it is not as necessary

with the forced draft hatchery as with dead air incubators, because the moving air adds to or removes heat from the eggs with great rapidity. Because of this fact, *eggs at all stages can be placed in the same trays of the Hastings Hatchery with little or no injury.* Mr. Hastings hatched several thousand eggs under such conditions in the Brooklyn Plant last year." (Vol. II, R. 1116.)

How can petitioner say that this article in 1913 was referring to eggs of the same age having different temperatures when the article specifically teaches the use of the forced draft fan to overcome the problem of heat because of eggs of different stages of incubation?

Petitioner's reply brief says that Hastings admitted "The Dollar Hen" was an impractical poultry book. (p. 6, Pet. Reply Brief.) That is incorrect. The record (Vol. I, p. 578) shows that he actually testified thus:

> "The book entitled 'The Dollar Hen' contained a great deal of practical information, and contained considerable speculative discussion of further development in the poultry industry.
>
> "Q. I call your attention to the top of the third column of the first page of the Country Gentleman article, where it says: 'Ten years ago, I wrote an impractical poultry book.'
>
> "A. I see the statement. May I add to that statement, by saying that ten years ago, at that time (referring to 'The Dollar Hen'), **I made statements concerning incubation which were considered impractical at that time, and were so looked upon by the poultry journalists, but that they were prophetic, in many respects excellent indications of later developments in this method of incubation and also other features of the Poultry Culture.**" (Vol. I, R. 578.)

Is this the testimony of a man who says that his proposals were impractical?

Petitioner's brief says that Hastings admitted that Judge Westenhaver was correct in discarding "The Dol-

lar Hen." This again is untrue. What Hastings actually testified to was the following:

> "As to whether Judge Westenhaver was correct in the Wolff case, when he said that 'The Dollar Hen' article 'merely describes a process for maintaining temperature in cold storage and suggests how it may be applied in a hatchery,' he is correct in that being the essence of germination of my idea of describing and equalizing the stratification of temperature in a room by means of a forced draft from a fan. He is correct when he says the article 'Merely describes a process for maintaining temperature in cold storage and suggests how it may be applied in a hatchery.' He is correct when he says in the same opinion 'It does not purport to describe an apparatus or ever to have been put to any use.' " (Vol. I, R. 540.)

It is obvious that Hastings made no claim that his incubator had been put to use prior to writing "The Dollar Hen."

POINT XIV.

REPLY TO THE PETITIONER AS TO THE DAVIS HATCHERY.

Petitioner claims that respondent was in error in stating that the Davis incubator was built and operated in the season of 1910-1911. That statement is true, as the following testimony of Hastings shows:

> "I built that incubator beginning in the late months of 1910, and built it early in the winter of 1910 and 1911, for operation in the hatching season of 1911. It was operated by me during the hatching season of 1911." (Vol. I, R. 506.)

Petitioner complains that the pamphlet issued by Hastings called "The Million Egg Incubator" for the purpose of raising capital for a larger incubator should not be accepted because there was an error in stating the capacity of the

incubator, and that the testimonial letters in the pamphlet should not be believed.

Such "mistaken statements of immaterial facts" and such errors relating "to the degree of efficiency of an invention" do not render a patent void. *Walk. on Pats.* (6th Ed.) Vol. 1, Sec. 218, pp. 291-2; *Electric Smelting & Aluminum Co. v. Carborundum Co.*, 102 F. 618 (C. C. A. 3). Neither would such errors defeat a prior use.

In *Corona v. Dovan*, 276 U. S. 358, 374, incorrect affidavits as to the use of the goods were filed. This Court said:

> "Hence the affidavits, though perhaps reckless, were not the basis for it or essentially material to its issue [the patent]. The reasonable presumption of validity furnished by the grant of the patent therefore would not seem to be destroyed."

It follows that the Hastings prior use is not defeated by the statements referred to.

Petitioner did not call the writers of these letters in rebuttal, as it could have.

The pamphlet is relied upon by us as showing that the Davis use was sufficiently successful for Hastings to use it as the basis for publicly advertising for more capital to build a bigger incubator. No man would rely publicly upon a failure to encourage capital to finance a bigger failure. That runs contrary to the experience of every man.

It is significant that Smith did not call a single witness to testify that the Davis prior use was a failure. Smith was not called to deny that he had ever heard of the Davis prior use or this publication, or the Hastings-Muskogee prior use and publications. Smith, as a matter of law, is presumed to have known of such publications because the Statute provides that such publications will defeat a patent. Smith was not called to rebut that presumption.

In petitioner's misstatement as to the construction of the Davis machine, great emphasis was made in petitioner's argument that the Davis machine was torn down and thrown in the trash. Unfortunately, for petitioner, this is not a correct statement of the facts or the real reason for the dismantling of the Davis machine. The incubator built at the Davis roadhouse in the cellar was so much larger than the door giving access to the room in which it was built that it was necessary to dismantle the incubator when the Davis roadhouse failed; it had no relationship to the incubator. When this roadhouse was shut and dismantled, it was necessary to get the incubator out. Davis was no longer able to finance and promote the incubation business as his other business had failed and in the financial disaster the Hastings incubator was carried down in the crash. This is hardly the failure of the incubator and is hardly the scrapping of the incubator on its own defects rather than the inevitable result of Davis' financial disaster. It is significant that Davis and his wife have testified as to the success of this incubator and that it was not thrown away because it was a failure. **It is significant that petitioner did not call a single witness herein to refute the success of the Davis incubator.** The preponderance of the evidence is in favor of the success of the Hastings incubator at Brooklyn. The Court below so found on the weight of the evidence.

Petitioner's reply brief makes the extraordinary claim that Hastings, after he left Muskogee, later admitted that he built a machine in Ohio closer to the Smith-Buckeye machine than his previous machines. There is rebuttal proof in this record to such claim that Hastings so testified. The misleading construction of his testimony is refuted by the testimony itself, which we quote:

> "I then went to Tiffin with Mr. and Mrs. Hoppel. She had been the one interested in operating the hatchery, and Mr. Hoppel desired me to come there and

take over the operation for the reason of relieving his wife of work he did not wish her to continue. I built some hatching compartments in a building that was the adjoining room to the incubation rooms that they had, and did operate in it successfully. At Hoppel's plant I tried out a method of hatching very much more like the Smith Buckeye devices than I had used in the past, but the reason was that Mrs. Hoppel had seen the Smith Buckeye devices and **she believed me to be the original inventor of that type of incubation**, and therefore did not conceive that she had no right to have such machine built by me. She wished the construction to be of the type it was made, because that impressed her as being a construction that she wanted to use because it was more similar to incubators she had seen in operation." (Vol. I, R. 577.)

Petitioner complains that the Hastings 1911 application does not teach staged incubation, where it refers to overcoming unevenness of temperature. (Vol. II, R. 731-2.) It is apparent from the previous publication "The Dollar Hen" that Hastings knew of the problem of unevenness of temperature that came from eggs of different stages of incubation because it said:

> "There are no pipes or other sources of heat in the egg chambers. All temperature regulation is by means of air heated (or cooled as the case may be) outside of the egg rooms and *forced into the egg rooms by a motor driven cone fan, maintaining a steady current of air*, the rate of movement of which may be varied at will. The air movement maintained will always be sufficiently brisk however, to prevent an unevenness of temperature in different parts of the room." (Pages 104-5.)

It is further apparent that the words "unevenness of temperature" meant this because in "Poultry Culture" publication it referred to the differences in temperature in columns of eggs of different ages and the use by Hastings at Brooklyn of a forced draft, as well as at Muskogee, for overcoming this problem.

Again the Court has found that at that stage of the art, stage incubation with eggs of different ages was a known custom which is confused in the record by Taggart, etc. The application must be read in the light of the known problem and practice in the art: the forced draft propounded in the application was for the solution of this problem.

POINT XV.

TITLE: EXCLUSIVE LICENSEE, THE BUCKEYE INCUBATOR COMPANY, A NECESSARY* PARTY, IS ABSENT: SMITH HAS NO TITLE TO SUE IN THE EXCLUSIVE FIELD OF THE LICENSEE-ASSIGNEE, IN WHICH FIELD RESPONDENT OPERATES.

Facts.

We raise a question of jurisdiction. Smith first assigned his patent to The Buckeye Incubator Company. Later, The Buckeye Incubator Company re-assigned it to him. (Vol. II, R. 715.) Simultaneously with this latter assignment Smith executed this grant of the Smith patent to The Buckeye Incubator Company:

> "in consideration of One Dollar ($1.00) in hand paid, and other valuable considerations, does hereby give and grant unto The Buckeye Incubator Company, a corporation of the State of Ohio, having an office and place of business at Springfield, Ohio, its successors and assigns, **the full and exclusive right, liberty and license to make, use and sell in and throughout the United States and the territories and possessions thereof incubators embodying the inventions shown, described and claimed in said letters patent** and each of them, and any

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* Now that we have the opportunity of an additional brief, we deem it proper to call the Court's attention to this question. We do not believe the Court need consider it as we feel you will arrive at the same conclusion as the Second Circuit. It had the question briefed before it, but found the Hastings prior use anticipated the patent.

improvements now or hereafter owned by the licensor." (Vol. II, R. 716, Pltf.'s Ex. 33.)

Simultaneously with this assignment and license, a contract was entered into (Pltf.'s Ex. 34) which divided the patent into two parts, each party taking exclusively one part. This contract reads as follows:

> "**Said Smith agrees**, for himself, his heirs, and assigns, **not to make, use or sell, or permit to be made, used or sold by others than the Company under said patents, any incubators of a total capacity up to twenty-five thousand (25,000) eggs**; it being understood that the said Smith retains his exclusive rights for making, using and selling incubators having a total capacity of twenty-five thousand (25,000) eggs and over. **The Company, for itself, its successors and assigns, agrees not to make, use or sell, or permit to be made, used or sold by others any incubators under said patents of a total capacity between sixteen thousand five hundred (16,500) eggs and twenty-five thousand (25,000) eggs.** It is the purpose and intent of this agreement that the Company shall hereafter in the United States and Canada, have the exclusive right to manufacture incubators under said patents up to and including a capacity of sixteen thousand five hundred (16,500) eggs, and said Smith shall have the exclusive right to manufacture incubators under said patents with a total capacity of twenty-five thousand (25,000) eggs and over; and that in the zone between sixteen thousand five hundred (16,500) egg capacity and twenty-five thousand (25,000) egg capacity, neither of the parties hereto shall make, use or sell, or permit to be made, used or sold, incubators under said patents." (Vol. II, R. 720.)

It will be noted that the Buckeye Company undertook the sole responsibility for future supplying the field with incubators up to 16,500 egg capacity when it was agreed it would not "permit to be made, used or sold by others any incubators under said patents of a total capacity between sixteen thousand five hundred (16,500) eggs and twenty-five thousand (25,000) eggs."

This contract provided for suing infringers as follows:

"Said Smith shall have the right to and shall prosecute all infringers, shall pay all the expense of such prosecution and shall receive all recoveries therefrom, except as to pending suits in which the Company shall have incurred expense, in which cases the expense shall be reimbursed to the Company from any recoveries from said suits. In the event said Smith shall not, upon request of the Company, prosecute infringers, the Company shall have the right to prosecute them, and to join the said Smith as the owner of said patents in such prosecution and in such event the Company shall be entitled to all recoveries and shall pay all expense." (Vol. II, R. 720-721.)

Respondent is not a party to this contract and can neither rely upon it or be bound by it. It cannot change the law that the legal title and the right to sue cannot be separated.

There is nothing in this record to show that the Company asked Smith to prosecute James and Elmira. This contract recognizes the legal necessity of joint action where it says "the Company shall have the right to prosecute them and to join the said Smith as the owner of said patents." The first part of this provision, if construed that Smith could bring suit alone for infringement not within his capacity of 25,000 eggs and above, would be illegal because it would separate the title to the patent and the right to sue. *Crown v. Nye,* 261 U. S. 24; *Independent v. Radio,* 269 U. S. 459; *Peters v. Bates,* 295 U. S. 392.

In the instant case, the invasion of the monopoly, if any, has been within the exclusive territory of The Buckeye Incubator Company, as respondent's apparatus is of 5,000 egg capacity and The Buckeye Incubator Company has the exclusive right to make, use and sell under the Smith patent up to 16,500 egg capacity.

If Smith should prevail in this cause, The Buckeye Incubator Company is not bound, as it is not a party to this

suit and James was not a party to the contract with Smith and Buckeye. Buckeye still could seek its recovery for any injury to it within its special field where it both owns the patent and is manufacturing. Therefore, Buckeye's interests cannot be disposed of in this suit without it being present because it is a necessary and indispensable party.

The District Court held that The Buckeye Incubator Company did not have an undivided interest and, therefore, was not a necessary party. This was error. We know of no way to give Buckeye an undivided interest in this patent other than was followed in this document of assignment (Exhibit 33), by which it got "the full and exclusive right, liberty and license to make, use and sell in and throughout the United States" etc. The document (Exhibit 34) gave it also the exclusive right for all purposes up to 16,500 egg capacity and Smith agreed "not to make, use or sell • • • any incubators of a total capacity up to twenty-five thousand (25,000) eggs." This is an assignment of an undivided part of this patent to Buckeye.

An additional fact is of interest. In the *Waxham* suit before this Court, Smith and Buckeye were joint plaintiffs. There is no proof of any change of title since the initiation of that suit. In the *Snow* suit, Smith alone was the plaintiff.

This so-called exclusive license by Smith to Buckeye was an assignment of the entire right, title and interest to make, use and sell of an undivided part of the Smith patent. This Court has so held in *Waterman v. MacKenzie*, 138 U. S. 252, 255:

> "• • • The patentee or his assigns may, by instrument in writing, assign, grant and convey, either, 1st, the whole patent, comprising the exclusive right to make, use and vend the invention throughout the United States; or, **2d, an undivided part or share of that exclusive right**; or, 3d, the exclusive right under the patent within and throughout a specified part of the United States. Rev. Stat. Sec. 4898. **A transfer of either of these three kinds of interests is an assign-**